UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 8
1595 Wynkoop Street
DENVER, CO 80202-1129
Phone 800-227-8917
http://www.epa.gov/region08

MAR 0 2 2015

Ref: 8ENF-UFO

CERTIFIED MAIL 7009-3410-0000-2599-4807
RETURN RECEIPT REQUESTED

Mr. Les Farnsworth, District Supervisor
Petroglyph Operating Company, Inc.
4116 W 3000 S Ioka Lane
P.O. Box 607
Roosevelt, Utah 84066

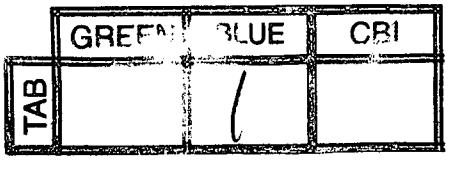
Re: Underground Injection Control (UIC)
Permission to Resume Injection
Ute Tribal 05-08 Well
EPA Permit ID# UT20736-04324
API # 43-013-31306
Antelope Creek Field
Duchesne County, Utah

Dear Mr. Farnsworth:

On February 13, 2015, the Environmental Protection Agency (EPA) received information from Petroglyph Operating Company, Inc. on the above referenced well concerning the workover to address a loss of mechanical integriy and the followup mechanical integrity test (MIT) conducted on February 9, 2015. The data submitted shows that the well passed the required MIT. Therefore, pursuant to Title 40 of the Code of Federal Regulations Section 144.51(q)(2) (40 C.F.R. § 144.51(q)(2)), permission to resume injection is granted. Under continuous service, the next MIT will be due on or before February 9, 2020.

Pursuant to 40 C.F.R. § 144.52(a)(6), if the well is not used for a period of at least two (2) years ("temporary abandonment"), it shall be plugged and abandoned unless the EPA is notified and procedures are described to the EPA ensuring the well will not endanger underground sources of drinking water ("non-endangerment demonstration") during its continued temporary abandonment. A successful MIT is an acceptable non-endangerment demonstration and would be necessary every two (2) years the well continues in temporary abandonment.

Failure to comply with a UIC Permit, or the UIC regulations found at 40 C.F.R. Parts 144 through 148 constitute one or more violations of the Safe Drinking Water Act, 42 U.S.C. § 300h. Such non-compliance may subject you to formal enforcement by the EPA, as codified at 40 C.F.R. Part 22.



If you have any questions concerning this letter, you may contact Gary Wang at (303) 312-6469. Please direct all correspondence to the attention of Gary Wang at Mail Code 8ENF-UFO.

Sincerely,

Arturo Palomares, Director
Water Technical Enforcement Program
Office of Enforcement, Compliance
and Environmental Justice

cc: Gordon Howell, Chairman, Uintah & Ouray Business Committee
Ronald Wopsock, Vice-Chairman, Uintah & Ouray Business Committee
Reannin Tapoof, Executive Assistant, Uintah & Ouray Business Committee
Stewart Pike, Councilman, Uintah & Ouray Business Committee
Tony Small, Councilman, Uintah & Ouray Business Committee
Bruce Ignacio, Councilman, Uintah & Ouray Business Committee
Phillip Chimburas, Councilman, Uintah & Ouray Business Committee
Manuel Myore, Director of Energy, Minerals and Air Programs
Brad Hill, Utah Division of Oil, Gas and Mining

bcc: Jennifer Harris (8P-TA)
Kimberly Pardue-Welch (8ENF-W)
Gary Wang (8ENF-UFO)

Cc addresses:

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Uintah & Ouray Business Committee
P.O. Box 70
Fort Duchesne, Utah 84026

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Ute Indian Tribe
P.O. Box 70
Fort Duchesne, Utah 84026

Brad Hill
Utah Division of Oil, Gas and Mining
P.O. Box 145801
Salt Lake City, Utah 84114

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Sent To: Mr. Les Farnsworth, District Supervisor
Petroglyph Operating Company, Inc.
Street or PO: 4116 W 3000 S Ioka Lane
City, St: P.O. Box 607
Roosevelt, UT 84066

7009 3410 0000 2599 4807

PS Form 3800, August 2006 — See Reverse for Instructions

SENDER: COMPLETE THIS SECTION

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1. Article Addressed to:

Mr. Les Farnsworth, District Supervisor
Petroglyph Operating Company, Inc.
4116 W 3000 S Ioka Lane
P.O. Box 607
Roosevelt, UT 84066

COMPLETE THIS SECTION ON DELIVERY

A. Signature
X Rodrigo Jurado ☐ Agent ☐ Addressee

B. Received by (Printed Name) C. Date of Delivery

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4. Restricted Delivery? *(Extra Fee)* ☐ Yes

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PS Form 3811, February 2004 Domestic Return Receipt 102595-02-M-1540

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
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1595 Wynkoop Street
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Ref: 8ENF-UFO CONCURRENCE COPY

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API # 43-013-31306
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Duchesne County, Utah

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8ENF-UFO
2/17/15

8ENF-W
2/19/15

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Sincerely,

Arturo Palomares, Director
Water Technical Enforcement Program
Office of Enforcement, Compliance
and Environmental Justice

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Kimberly Pardue-Welch (8ENF-W)
Gary Wang (8ENF-UFO)

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Salt Lake City, Utah 84114

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DENVER, CO 80202-1129
Phone 800-227-8917
http://www.epa.gov/region08

NOV 0 7 2014

Ref: 8ENF-UFO

CERTIFIED MAIL 7008-3230-0003-0724-9417
RETURN RECEIPT REQUESTED

Mr. Les Farnsworth, District Supervisor
Petroglyph Operating Company, Inc.
4116 W 3000 S Ioka Lane
P.O. Box 607
Roosevelt, UT 84066

Re: Underground Injection Control (UIC)
Notice of Violation:
Loss of Mechanical Integrity
Ute Tribal 05-08 Well
EPA Well ID# UT20736-04324
API # 43-013-31306
Antelope Creek Oil Field
Duchesne County, UT

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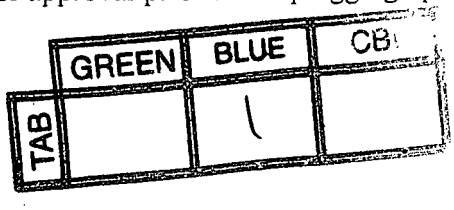
Within thirty (30) days of receipt of this letter, please submit a letter describing what action you intend to take regarding the well, including a time frame in which you anticipate the work to be completed. It is expected that you will return this well to compliance within ninety (90) days of the loss of mechanical integrity.

If you choose to plug and abandon this well, a plugging and abandonment plan must be submitted to the EPA for approval prior to the plugging operation.



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If you have any questions concerning this letter, you may contact Don Breffle at (303) 312-6198. Please direct all correspondence to the attention of Don Breffle at Mail Code 8ENF-UFO.

Sincerely,

Arturo Palomares, Director
Water Technical Enforcement Program
Office of Enforcement, Compliance
and Environmental Justice

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Manuel Myore, Director of Energy, Minerals and Air Programs
John Rogers, Associate Director, Oil & Gas, Utah Division of Oil, Gas and Mining

bcc: Jennifer Harris (8P-TA)
Kimberly Pardue-Welch (8ENF-W)

Cc addresses:

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Utah Division of Oil, Gas and Mining
P.O. Box 145801
Salt Lake City, Utah 84114

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NOV 7 2014

Mr. Les Farnsworth, Dist. Supervisor
Petroglyph Operating Company, Inc.
4116 W 3000 S Ioka Lane
P.O. Box 607
Roosevelt, UT 84066

COMPLETE THIS SECTION ON DELIVERY

A. Signature
X Julie Ray ☐ Agent ☐ Addressee

B. Received by (Printed Name) Julie Ray C. Date of Delivery 11/10/2014

D. Is delivery address different from item 1? ☐ Yes
If YES, enter delivery address below: ☐ No

ROOSEVELT UT 84066
NOV 10 2014
USPS

3. Service Type
☐ Certified Mail ☐ Express Mail
☐ Registered ☐ Return Receipt for Merchandise
☐ Insured Mail ☐ C.O.D.

4. Restricted Delivery? (Extra Fee) ☐ Yes

2. Article Number (Transfer from service label) 7008 3230 0003 0724 9417

PS Form 3811, February 2004 Domestic Return Receipt 102595-02-M-1540

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To Mr. Les Farnsworth, Dist. Supervisor
Petroglyph Operating Company, Inc.
Street or P 4116 W 3000 S Ioka Lane
City P.O. Box 607
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PS Form 3800, August 2006 See Reverse for Instructions

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EPA Well ID# UT20736-04324
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8ENF-UFO
10/30/14

KPW
8ENF-N
10/31/14

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Oil & Gas
Utah Division of Oil, Gas and Mining
P.O. Box 145801
Salt Lake City, Utah 84114

Inspection Report For Well: UT20736 - 04324

U.S. Environmental Protection Agency
Underground Injection Control Program, 8ENF-T
999 18th Street, Suite 300, Denver, CO 80202-2466

This form was printed on 9/24/2013

INSPECTOR(S): Lead: Roberts, Sarah — Date: 10/10/2013
Others: Ajayi, Christopher — Time: 10:10 am / pm

OPERATOR (only if different): _____

REPRESENTATIVE(S): Chad Stevenson

PRE-INSPECTION REVIEW

Petroglyph Operating Company, Inc

Well Name:	Ute Tribal 05-08		
Well Type:	Enhanced Recovery (2R)		
Operating Status:	AC (ACTIVE) as of 12/31/2002		
Oil Field:	Antelope Creek (Duchesne)		
Location:	SENE S5 T5S R3W		
Indian Country:	X, Uintah and Ouray		
Last Inspection:	8/28/2012	***Allowable Inj Pressure:***	2055 /
Last MIT:	Pass 9/6/2011	***Annulus Pressure From Last MIT:***	1220

BLACK = POSSIBLE VIOLATION GREY = DATA MISSING

INSPECTION TYPE: (Select One)
- ☐ Construction / Workover
- ☐ Plugging
- ☐ Post-Closure
- ☐ Response to Complaint
- ☒ Routine
- ☐ Witness MIT
- ☐ Other

ICIS Entered
Date 12/19/13
Initials DB

OBSERVED VALUES:

Tubing Gauge:	☒ Yes ☐ No	Pressure: U: 1997 / L: ____ psig	Gauge Range: Scada psig	Gauge Owner:	☐ EPA ☒ Operator
Annulus Gauge:	☒ Yes ☐ No	Pressure: 0 psig	Gauge Range: ignored psig	Gauge Owner:	☐ EPA ☐ Operator
Bradenhead Gauge:	☐ Yes ☐ No	Pressure: ____ psig	Gauge Range: ____ psig	Gauge Owner:	☐ EPA ☐ Operator
Pump Gauge:	☐ Yes ☐ No	Pressure: ____ psig	Gauge Range: ____ psig	Gauge Owner:	☐ EPA ☐ Operator

Operating Status: (Select One)
- ☐ Active
- ☒ Not Injecting
- ☐ Plugged and Abandoned
- ☐ Being Reworked
- ☐ Production
- ☐ Under Construction

U2 Entered
Date 12/17/13
Initial SC

See page 2 for photos, comments, and site conditions.

TAB	GREEN	BLUE	CB
		1	

Inspection Report For Well: UT20736 - 04324 (PAGE 2)

PHOTOGRAPHS: ☐ Yes ☒ No List of photos taken: _____

Comments and site conditions observed during inspection: _____

GPS: GPS File ID: _____

Signature of EPA Inspector(s): _____

☐ Data Entry ☐ Compliance Staff ☐ Hard Copy Filing

NOTICE OF INSPECTION

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION VIII, 999 18TH STREET - SUITE 500
DENVER, COLORADO 80202-2405

Date: 12/16/13
Hour: 8:00a

Notice of inspection is hereby given according to Section 1445(b) of the Safe Drinking Water Act (42 U.S.C. §300f et seq.).

Firm Name: Petroglyph Operating, Inc.

Firm Address: Roosevelt, UT, Antelope Creek Oil Field

REASON FOR INSPECTION:

For the purpose of inspecting records, files, papers, processes, controls and facilities, and obtaining samples to determine whether the person subject to an applicable underground injection control program has acted or is acting in compliance with the Safe Drinking Water Act and any applicable condition of permit or rule authorization.

SECTION 1445(b) of the SAFE DRINKING WATER ACT is quoted below:

Section 1445(b)(1): Except as provided in Paragraph (2), the Administrator, or representatives of the Administrator duly designated by him, upon presenting appropriate credentials, and a written notice to any supplier of water or other person subject to (a), or person subject (A) a national primary drinking water regulation prescribed under Section 1412(B) an applicable Underground Injection Control Program, or (C) any requirement to monitor an unregulated contaminant pursuant to subsection (a), or person in charge of any of the property of such supplier or other person referred to in clause (A), (B), or (C), is authorized to enter any establishment, ... facility, or other property of such supplier or other person in order to determine whether such supplier or other person has acted or is acting in compliance with this title, including for this purpose, inspection, at reasonable times, of records, files, papers, processes, controls, and facilities, or in order to test any feature of a public water system, including its raw water source. The Administrator or the Comptroller General (or any representative designated by either) shall have access for the purpose of audit and examination to any records, reports, or information of a grantee which are required to be maintained under subsection (a) or which are pertinent to any financial assistance under this title.

Sarah Roberts
Inspector's Name & Title (Print)

Inspector's Signature

EPA R8 3560-1 (8-89)

Original - Regional Office Copy
Yellow Copy - Operator Copy

OMB No. 2040-0042 Approval Expires 11/30/2014

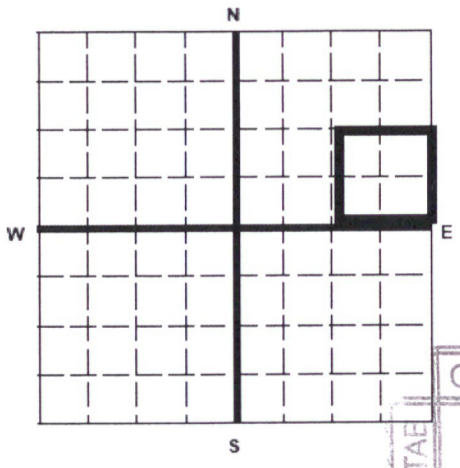
United States Environmental Protection Agency
Washington, DC 20460

ANNUAL DISPOSAL/INJECTION WELL MONITORING REPORT

Name and Address of Existing Permittee
Petroglyph Operating Company, Inc. 2258
P.O. Box 7608
Boise, Idaho 83709

Name and Address of Surface Owner
Ute Indian Tribe
P.O. Box 70
Ft. Duchesne, Utah, 84026

Locate Well and Outline Unit on Section Plat - 640 Acres



State	County	Permit Number
Utah	Duchesne	UT2736-04324

Surface Location Description
___ 1/4 of ___ 1/4 of SE 1/4 of NE 1/4 of Section 5 Township 5S Range 3W

Locate well in two directions from nearest lines of quarter section and drilling unit

Surface Location 2500 ft. frm (N/S) N Line of quarter section
and 550 ft. from (E/W) E Line of quarter section.

WELL ACTIVITY
- [ ] Brine Disposal
- [X] Enhanced Recovery
- [ ] Hydrocarbon Storage

TYPE OF PERMIT
- [ ] Individual
- [X] Area

Number of Wells 111

U2 Entered
Date 3/24/17
Initial DS

GREEN BLUE CBL
TAB 2

Lease Name Ute Indian Tribe Well Number UTE TRIBAL 05-08

		INJECTION PRESSURE		TOTAL VOLUME INJECTED		TUBING – CASING ANNULUS PRESSURE (OPTIONAL MONITORING)	
MONTH	YEAR	AVERAGE PSIG	MAXIMUM PSIG	BBL	MCF	MINIMUM PSIG	MAXIMUM PSIG
January	16	1663	1700	13734		0	0
February	16	1711	1713	13983		0	0
March	16	1727	1731	14667		0	0
April	16	1725	1739	13998		0	0
May	16	1684	1746	14958		0	0
June	16	1627	1663	12471		0	0
July	16	1655	1693	13920		0	0
August	16	1673	1699	14436		0	0
September	16	1683	1695	13881		0	0
October	16	1682	1690	15139		0	0
November	16	1613	1642	12161		0	0
December	16	1639	1655	11900		0	0

Certification

I certify under the penalty of law that I have personally examined and am familiar with the information submitted in this document and all attachments and that, based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the information is true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibliity of fine and imprisonment. (Ref. 40 CFR 144.32)

Name and Official Title *(Please type or print)*	Signature	Date Signed
Chad Stevenson, Water Facilities Supervisor		03/21/2017

EPA Form 7520-11 (Rev. 12-11)

Multi-Chem Analytical Laboratory
1553 East Highway 40
Vernal, UT 84078

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Units of Measurement: **Standard**

Water Analysis Report

Production Company:	**PETROGLYPH OPERATING CO INC - EBUS**	Sales Rep:	**James Patry**
Well Name:	**PETROGLYPH U.T. 05-08, DUCHESNE**	Lab Tech:	**Kaitlyn Natelli**
Sample Point:	**Well Head**		
Sample Date:	**1/3/2017**		
Sample ID:	**WA-344976**		

Scaling potential predicted using ScaleSoftPitzer from Brine Chemistry Consortium (Rice University)

Sample Specifics

Test Date:	1/9/2017
System Temperature 1 (°F):	60
System Pressure 1 (psig):	2000
System Temperature 2 (°F):	180
System Pressure 2 (psig):	50
Calculated Density (g/ml):	1.0003
pH:	7.62
Calculated TDS (mg/L):	4489.73
CO2 in Gas (%):	
Dissolved CO_2 (mg/L)):	40.00
H_2S in Gas (%):	
H2S in Water (mg/L):	10.00
Tot. SuspendedSolids(mg/L):	
Corrosivity(LanglierSat.Indx)	0.00
Alkalinity:	

Analysis @ Properties in Sample Specifics

Cations	*mg/L*	*Anions*	*mg/L*
Sodium (Na):	1441.90	Chloride (Cl):	1500.00
Potassium (K):	12.12	Sulfate (SO_4):	60.00
Magnesium (Mg):	20.68	Bicarbonate (HCO_3):	1403.00
Calcium (Ca):	33.22	Carbonate (CO_3):	
Strontium (Sr):	1.99	Hydroxide(HO):	
Barium (Ba):	2.25	Acetic Acid (CH_3COO)	
Iron (Fe):	2.26	Propionic Acid (C_2H_5COO)	
Zinc (Zn):	0.04	Butanoic Acid (C_3H_7COO)	
Lead (Pb):	0.00	Isobutyric Acid ($(CH_3)_2CHCOO$)	
Ammonia NH_3:		Fluoride (F):	
Manganese (Mn):	0.10	Bromine (Br):	
Aluminum (Al):	0.00	Silica (SiO_2):	12.17
Lithium (Li):	3.12	Calcium Carbonate ($CaCO_3$):	
Boron (B):	2.07	Phosphates (PO_4):	3.03
Silicon (Si):	5.69	Oxygen (O_2):	

Notes:

(PTB = Pounds per Thousand Barrels)

		Calcium Carbonate		Barium Sulfate		Iron Sulfide		Iron Carbonate		Gypsum CaSO4·2H2O		Celestite SrSO4		Halite NaCl		Zinc Sulfide	
Temp (°F)	PSI	SI	PTB	SI	PTB	SI	PTB	SI	PTB	SI	PTB	SI	PTB	SI	PTB	SI	PTB
180.00	50.00	1.12	25.26	0.55	0.95	2.80	1.24	2.14	1.63	0.00	0.00	0.00	0.00	0.00	0.00	8.09	0.02
167.00	267.00	0.96	23.63	0.57	0.97	2.70	1.24	1.96	1.63	0.00	0.00	0.00	0.00	0.00	0.00	8.13	0.02
153.00	483.00	0.85	22.25	0.60	1.00	2.66	1.24	1.83	1.62	0.00	0.00	0.00	0.00	0.00	0.00	8.23	0.02
140.00	700.00	0.75	20.67	0.64	1.03	2.64	1.24	1.70	1.61	0.00	0.00	0.00	0.00	0.00	0.00	8.34	0.02
127.00	917.00	0.65	18.92	0.69	1.06	2.62	1.24	1.57	1.60	0.00	0.00	0.00	0.00	0.00	0.00	8.47	0.02
113.00	1133.00	0.56	17.03	0.76	1.10	2.63	1.24	1.45	1.58	0.00	0.00	0.00	0.00	0.00	0.00	8.62	0.02
100.00	1350.00	0.48	15.06	0.84	1.14	2.64	1.24	1.32	1.56	0.00	0.00	0.00	0.00	0.00	0.00	8.79	0.02
87.00	1567.00	0.40	13.07	0.93	1.18	2.68	1.24	1.20	1.54	0.00	0.00	0.00	0.00	0.00	0.00	8.98	0.02
73.00	1783.00	0.34	11.13	1.04	1.22	2.73	1.24	1.08	1.50	0.00	0.00	0.00	0.00	0.00	0.00	9.19	0.02
60.00	2000.00	0.27	9.30	1.17	1.25	2.80	1.24	0.96	1.46	0.00	0.00	0.00	0.00	0.00	0.00	9.43	0.02

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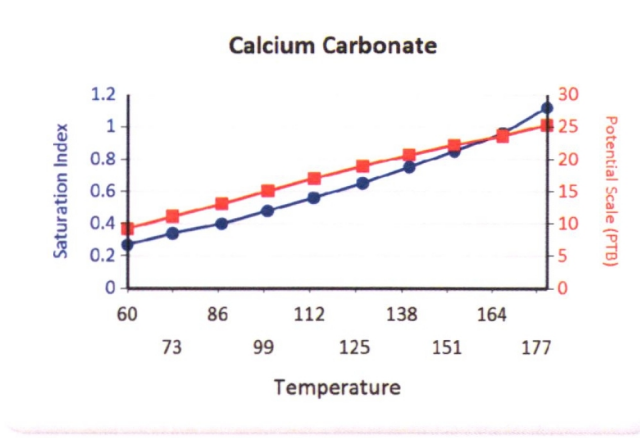
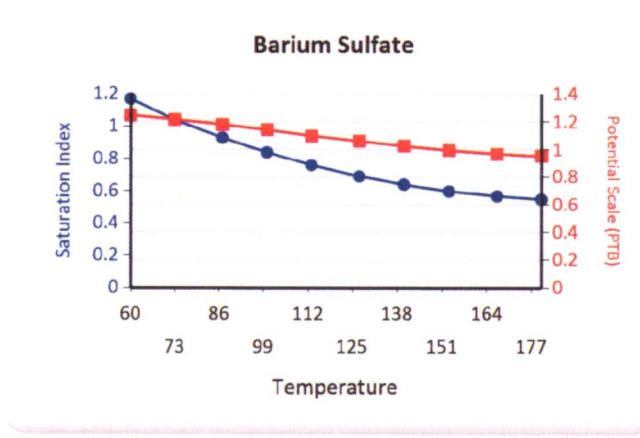
Water Analysis Report

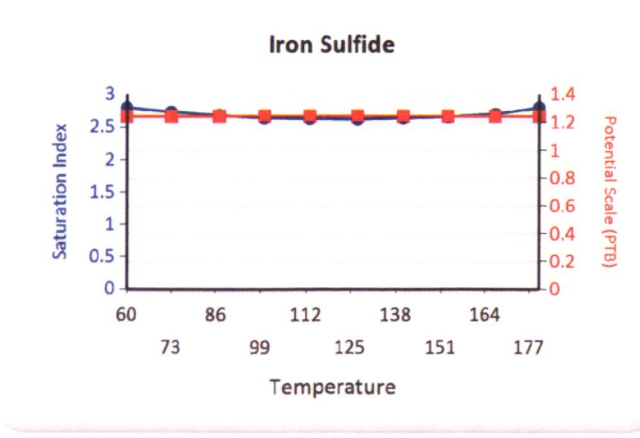
		Hemihydrate CaSO4~0.5H2O		Anhydrate CaSO4		Calcium Fluoride		Zinc Carbonate		Lead Sulfide		Mg Silicate		Ca Mg Silicate		Fe Silicate	
Temp (°F)	PSI	SI	PTB	SI	PTB	SI	PTB	SI	PTB	SI	PTB	SI	PTB	SI	PTB	SI	PTB
180.00	50.00	0.00	0.00	0.00	0.00	0.00	0.00	0.30	0.01	0.00	0.00	2.40	16.46	0.59	4.40	6.84	1.75
167.00	267.00	0.00	0.00	0.00	0.00	0.00	0.00	0.08	0.00	0.00	0.00	1.30	9.17	0.00	0.00	5.91	1.74
153.00	483.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.49	3.54	0.00	0.00	5.27	1.72
140.00	700.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	4.65	1.70
127.00	917.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	4.03	1.66
113.00	1133.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3.44	1.61
100.00	1350.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.85	1.53
87.00	1567.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.29	1.41
73.00	1783.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.75	1.24
60.00	2000.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.22	1.00

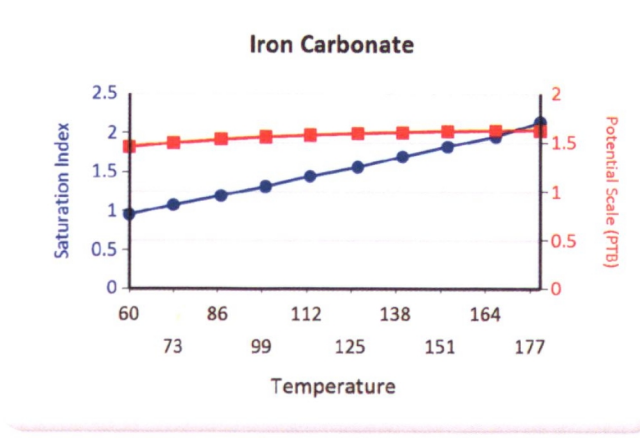
These scales have positive scaling potential under initial temperature and pressure: Calcium Carbonate Barium Sulfate Iron Sulfide Iron Carbonate Zinc Sulfide Zinc Carbonate Mg Silicate Ca Mg Silicate Fe Silicate

These scales have positive scaling potential under final temperature and pressure: Calcium Carbonate Barium Sulfate Iron Sulfide Iron Carbonate Zinc Sulfide Fe Silicate









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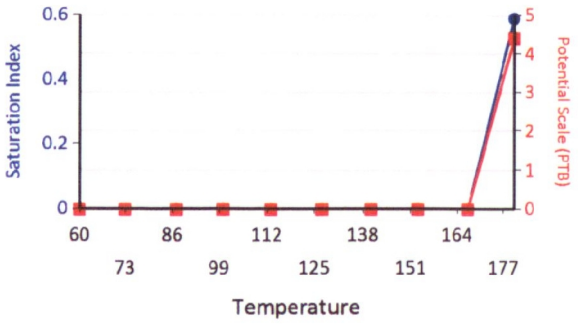
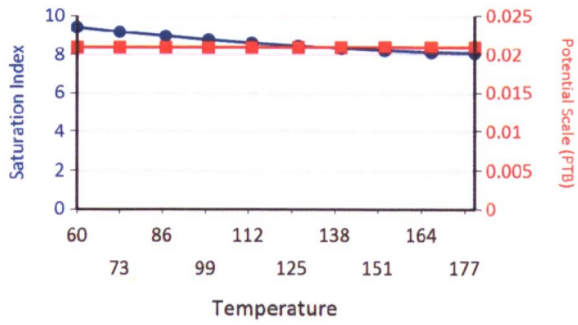
Water Analysis Report

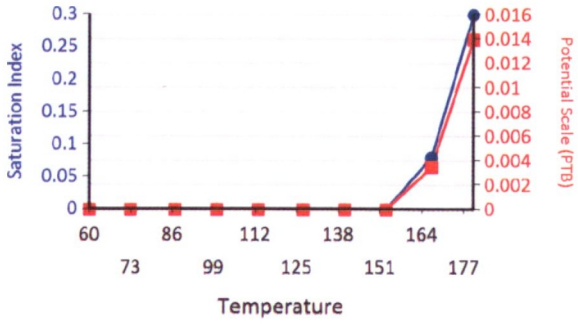
Ca Mg Silicate



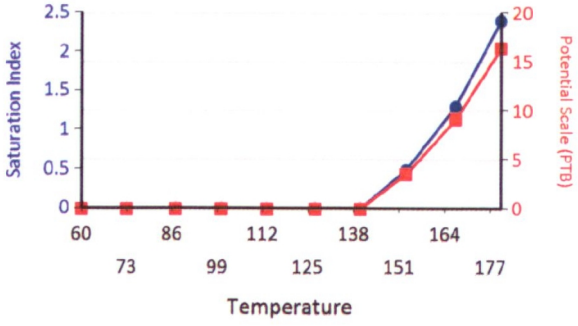
Zinc Sulfide



Zinc Carbonate



Mg Silicate



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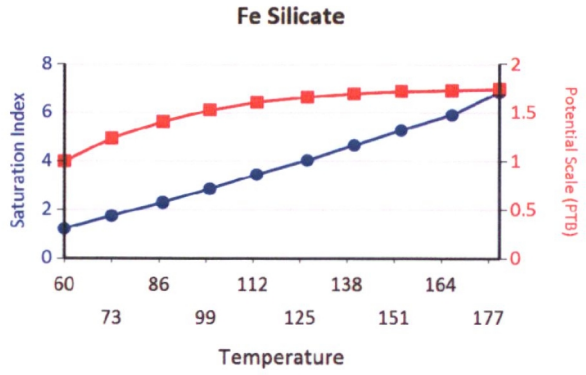


OMB No. 2040-0042 Approval Expires 11/30/2014

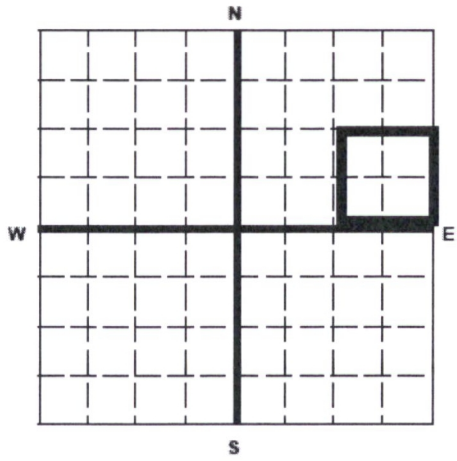
United States Environmental Protection Agency
Washington, DC 20460

ANNUAL DISPOSAL/INJECTION WELL MONITORING REPORT

Name and Address of Existing Permittee
Petroglyph Operating Company, Inc. 2258
P.O. Box 7608
Boise, Idaho 83709

Name and Address of Surface Owner
Ute Indian Tribe
P.O. Box 70
Ft. Duchesne, Utah, 84026

Locate Well and Outline Unit on Section Plat - 640 Acres



State	County	Permit Number
Utah	Duchesne	UT2736-~~04434~~ 04324

Surface Location Description
___ 1/4 of ___ 1/4 of SE 1/4 of NE 1/4 of Section 5 Township 5S Range 3W

Locate well in two directions from nearest lines of quarter section and drilling unit

Surface Location 2500 ft. frm (N/S) N Line of quarter section
and 550 ft. from (E/W) E Line of quarter section. U2 Entered

WELL ACTIVITY
- [ ] Brine Disposal
- [X] Enhanced Recovery
- [ ] Hydrocarbon Storage

TYPE OF PERMIT
- [ ] Individual
- [X] Area

Number of Wells 111

Date 2/29/16
Initial BB

Lease Name Ute Indian Tribe Well Number UTE TRIBAL 05-08

		INJECTION PRESSURE		TOTAL VOLUME INJECTED		TUBING – CASING ANNULUS PRESSURE (OPTIONAL MONITORING)	
MONTH	YEAR	AVERAGE PSIG	MAXIMUM PSIG	BBL	MCF	MINIMUM PSIG	MAXIMUM PSIG
January	15	1342	1666	0		0	1450
February	15	413	1176	0		0	0
March	15	1244	1291	6410		0	0
April	15	1184	1258	13403		0	0
May	15	1318	1350	15102		0	0
June	15	1381	1423	14453		0	0
July	15	1475	1501	15556		0	0
August	15	1506	1536	14622		0	0
September	15	1575	1583	14257		0	0
October	15	1605	1624	15327		0	0
November	15	1630	1643	14951		0	0
December	15	1655	1671	15051		0	0

Certification

I certify under the penalty of law that I have personally examined and am familiar with the information submitted in this document and all attachments and that, based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the information is true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibliity of fine and imprisonment. (Ref. 40 CFR 144.32)

Name and Official Title *(Please type or print)*	Signature	Date Signed
Chad Stevenson, Water Facilities Supervisor		02/08/2016

EPA Form 7520-11 (Rev. 12-11)

GREEN BLUE CSI TAB 2

Petroglyph Operating Company, Inc.
Annulus Pressure Cause and Mitigation Measures
EPA Annual Injection Report for Reporting Period 2015

Well Name: Ute Tribal 05-08

UIC Permit Number: UT2736-04324

API Number: 43-013-31306

Cause of Pressure and Mitigation Measures:

This well was shut in as of September 2014. The Mechanical Integrity Test failed until January 24, 2015. Rig on well on January 25, 2015. Began injecting March 3, 2015.

Please see copy of attached notice of resolution and successful MIT test and Wellbore Schematic submitted to EPA on February 10, 2015.

PETROGLYPH

Rodrigo Jurado

From: Rodrigo Jurado
Sent: Monday, January 26, 2015 12:26 PM
To: breffle.don@epa.gov
Subject: Petroglyph's Ute Tribal 05-08 Injector

Mr. Breffle,
As we discussed previously, Petroglyph Operating plans to work-over and re-perforate the Ute Tribal 05-08 Injector. At this time a decision has not been made as to whether existing perforations will be acidized or not; but here is our tentative work-over plan:
Petroglyph Operating plans to work-over and re-perforate the referenced well. We plan to pull all tubing and packers, scan log on the way out, lay down all bad pipe, make a bit and scraper run to PBTD, circulate the well and re-perforate at at the following depths: 5474-87, 5458-64, 5443-48, 5436-40, 5410-16, 5398-5403 & 5359-66. New perforations will be made at: 5292-5300, 4920-22, 4313-17, 4926-34, 4764-72, 4498-4504, 4490-93 & 4480-88. We will break down perfs, test their injection rates, run in with an Arrowset 1 Packer and perform a Mechanical Integrity Test. Injection will resume after EPA Approval is received.
Equipment has been moved on location and work is underway. We will submit a detailed subsequent report to you, along with a Mechanical Integrity Test as soon as work is completed and data is gathered.
Thanks,
Rodrigo Jurado
Petroglyph Operating Company, Inc.
Regulatory Compliance Specialist
P.O. BOX 607
Roosevelt, UT 84066
OFFICE: (435) 722-5302
MOBILE: (435) 609-3239
FAX: (435) 722-9145

FEDERAL APPROVAL OF THIS ACTION IS NECESSARY

STATE OF UTAH
DEPARTMENT OF NATURAL RESOURCES
DIVISION OF OIL, GAS, AND MINING

FORM 9

5.LEASE DESIGNATION AND SERIAL NUMBER: 14-20-H62-3504

SUNDRY NOTICES AND REPORTS ON WELLS

6. IF INDIAN, ALLOTTEE OR TRIBE NAME:

Do not use this form for proposals to drill new wells, significantly deepen existing wells below current bottom-hole depth, reenter plugged wells, or to drill horizontal laterals. Use APPLICATION FOR PERMIT TO DRILL form for such proposals.

7.UNIT or CA AGREEMENT NAME: ANTELOPE CREEK

1. TYPE OF WELL Water Injection Well

8. WELL NAME and NUMBER: UTE TRIBAL 05-08

2. NAME OF OPERATOR: PETROGLYPH OPERATING CO

9. API NUMBER: 43013313060000

3. ADDRESS OF OPERATOR: 960 Broadway Avenue, Ste 500 , Boise, ID, 83703

PHONE NUMBER: 208 685-7685 Ext

9. FIELD and POOL or WILDCAT: ANTELOPE CREEK

4. LOCATION OF WELL
FOOTAGES AT SURFACE: 2500 FNL 0550 FEL
QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN: Qtr/Qtr: SENE Section: 05 Township: 05.0S Range: 03.0W Meridian: U

COUNTY: DUCHESNE

STATE: UTAH

11.

CHECK APPROPRIATE BOXES TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA

TYPE OF SUBMISSION	TYPE OF ACTION		
✓ NOTICE OF INTENT Approximate date work will start: 1/26/2015	☐ ACIDIZE	☐ ALTER CASING	☐ CASING REPAIR
	☐ CHANGE TO PREVIOUS PLANS	☐ CHANGE TUBING	☐ CHANGE WELL NAME
	☐ CHANGE WELL STATUS	☐ COMMINGLE PRODUCING FORMATIONS	☐ CONVERT WELL TYPE
☐ SUBSEQUENT REPORT Date of Work Completion:	☐ DEEPEN	☐ FRACTURE TREAT	☐ NEW CONSTRUCTION
	☐ OPERATOR CHANGE	☐ PLUG AND ABANDON	☐ PLUG BACK
	☐ PRODUCTION START OR RESUME	☐ RECLAMATION OF WELL SITE	☐ RECOMPLETE DIFFERENT FORMATION
☐ SPUD REPORT Date of Spud:	✓ REPERFORATE CURRENT FORMATION	☐ SIDETRACK TO REPAIR WELL	☐ TEMPORARY ABANDON
	☐ TUBING REPAIR	☐ VENT OR FLARE	☐ WATER DISPOSAL
☐ DRILLING REPORT Report Date:	☐ WATER SHUTOFF	☐ SI TA STATUS EXTENSION	☐ APD EXTENSION
	☐ WILDCAT WELL DETERMINATION	☐ OTHER	OTHER:

12. DESCRIBE PROPOSED OR COMPLETED OPERATIONS. Clearly show all pertinent details including dates, depths, volumes, etc.

Petroglyph Operating plans to work-over and re-perforate the referenced well. We plan to pull all tubing and packers, scan log on the way out, lay down all bad pipe, make a bit and scraper run to PBTD, circulate the well and re-perforate at at the following depths: 5474-87, 5458-64, 5443-48, 5436-40, 5410-16, 5398-5403 & 5359-66. New perforations will be made at: 5292-5300, 4920-22, 4313-17, 4926-34, 4764-72, 4498-4504, 4490-93 & 4480-88. We will break down perfs, test their injection rates, run in with an Arrowset 1 Packer and perform a Mechanical Integrity Test. Injection will resume after EPA Approval is received.

Approved by the
Utah Division of
Oil, Gas and Mining

January 29, 2015

Date:

By: Dark K Quist

NAME (PLEASE PRINT)	PHONE NUMBER	TITLE
Rodrigo Jurado	435 722-5302	Regulatory & Compliance Spc
SIGNATURE N/A		**DATE** 1/26/2015

RECEIVED: Jan. 26, 2015

February 10, 2015

EPA
ATTN: Don Breffle
Region 8
1595 Wyncoop Street
Denver, CO 80202-8917

UIC Permit #UT2736-04324
Well ID: Ute Tribal 05-08
Ute Tribal No. 05-08, Duchesne County, Utah

Dear Mr. Breffle,

Please find enclosed the successful MIT test and Wellbore Schematic for the above referenced well. This test was performed to provide proof of integrity after rigged up on the well to address a loss of mechanical integrity. The Wellbore Schematic provides proof of the injection packer's set depth; following the operations described below.

We rigged up on the well to address a loss of mechanical integrity. We released packer, pulled the tubing and scan logged on the way out. We laid down the whole string. We picked up new tubing, made a bit and scraper run past all perforations, circulated and cleaned the well. We then perforated within the permitted injection interval of 3,973'-5,554' the following: 5,474'-87', 5,458'-64', 5,443'-48', 5,436'-40', 5,410'-16', 5,398'-5,403', 5,359'-66', 5,292'-5,300', 4,926'-34', 4,920'-22', 4,913'-17', 4,764'-72', 4,498'-4,504', 4,490'-93' & 4,480'-88'. We isolated various intervals and tested their injection rates with mixed results. We pulled all tools and ran in with a new Arrowset 1 Packer and new tubing, breaking and doping all joints on the way in. We had trouble getting a successful MIT on the casing and pulled out until a successful test was obtained. We initially thought were too far from the top perforation to set the packer but a re-tally of the tubing revealed we were only 60' above the top perforation. The top perforation is at 4,283' and the packer was set at 4,223'. This was verified with a wireline before charting a successful MIT test on the casing to 1900 psi with no loss. Perforations were made using were Titan 3-1/8" guns containing 11 grams charges, 0.36" EHD, 16.33" TTP, 4 SPF @ 120° Phased.

Please let us know if there is a need for further action on our part and we will immediately comply. My direct number is 435-722-5302 if you wish to contact us.

Sincerely,

Rodrigo Jurado
Regulatory Compliance Spc

Encl: MIT & Wellbore Schematic

STATE OF UTAH
DEPARTMENT OF NATURAL RESOURCES
DIVISION OF OIL, GAS, AND MINING

FORM 9

5.LEASE DESIGNATION AND SERIAL NUMBER: 14-20-H62-3504

SUNDRY NOTICES AND REPORTS ON WELLS

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8. WELL NAME and NUMBER: UTE TRIBAL 05-08

2. NAME OF OPERATOR: PETROGLYPH OPERATING CO

9. API NUMBER: 43013313060000

3. ADDRESS OF OPERATOR: 960 Broadway Avenue, Ste 500 , Boise, ID, 83703

PHONE NUMBER: 208 685-7685 Ext

9. FIELD and POOL or WILDCAT: ANTELOPE CREEK

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FOOTAGES AT SURFACE: 2500 FNL 0550 FEL
QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN: Qtr/Qtr: SENE Section: 05 Township: 05.0S Range: 03.0W Meridian: U

COUNTY: DUCHESNE

STATE: UTAH

11.

CHECK APPROPRIATE BOXES TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA

TYPE OF SUBMISSION	TYPE OF ACTION		
☐ NOTICE OF INTENT Approximate date work will start:	☐ ACIDIZE	☐ ALTER CASING	☐ CASING REPAIR
✓ SUBSEQUENT REPORT Date of Work Completion: 2/5/2015	☐ CHANGE TO PREVIOUS PLANS	☐ CHANGE TUBING	☐ CHANGE WELL NAME
☐ SPUD REPORT Date of Spud:	☐ CHANGE WELL STATUS	☐ COMMINGLE PRODUCING FORMATIONS	☐ CONVERT WELL TYPE
☐ DRILLING REPORT Report Date:	☐ DEEPEN	☐ FRACTURE TREAT	☐ NEW CONSTRUCTION
	☐ OPERATOR CHANGE	☐ PLUG AND ABANDON	☐ PLUG BACK
	☐ PRODUCTION START OR RESUME	☐ RECLAMATION OF WELL SITE	☐ RECOMPLETE DIFFERENT FORMATION
	✓ REPERFORATE CURRENT FORMATION	☐ SIDETRACK TO REPAIR WELL	☐ TEMPORARY ABANDON
	☐ TUBING REPAIR	☐ VENT OR FLARE	☐ WATER DISPOSAL
	☐ WATER SHUTOFF	☐ SI TA STATUS EXTENSION	☐ APD EXTENSION
	☐ WILDCAT WELL DETERMINATION	☐ OTHER	OTHER:

12. DESCRIBE PROPOSED OR COMPLETED OPERATIONS. Clearly show all pertinent details including dates, depths, volumes, etc.

Please see attached.

Accepted by the Utah Division of Oil, Gas and Mining
FOR RECORD ONLY
February 19, 2015

NAME (PLEASE PRINT)	PHONE NUMBER	TITLE
Rodrigo Jurado	435 722-5302	Regulatory & Compliance Spc
SIGNATURE N/A		**DATE** 2/16/2015

RECEIVED: Feb. 16, 2015

STATE OF UTAH
DEPARTMENT OF NATURAL RESOURCES
DIVISION OF OIL, GAS AND MINING

FORM 9

SUNDRY NOTICES AND REPORTS ON WELLS

Do not use this form for proposals to drill new wells, significantly deepen existing wells below current bottom-hole depth, reenter plugged wells, or to drill horizontal laterals. Use APPLICATION FOR PERMIT TO DRILL form for such proposals.

5 LEASE DESIGNATION AND SERIAL NUMBER: 14-20-H62-3504

6 IF INDIAN, ALLOTTEE OR TRIBE NAME: Ute Indian Tribe

7 UNIT or CA AGREEMENT NAME: 14-20-H62-4650

1 TYPE OF WELL: OIL WELL ☐ GAS WELL ☐ OTHER

8 WELL NAME and NUMBER: Ute Tribal 05-08

2 NAME OF OPERATOR: Petroglyph Operating Company Inc.

9 API NUMBER: 4301331306

3 ADDRESS OF OPERATOR: P.O. Box 607 CITY Roosevelt STATE UT ZIP 84066

PHONE NUMBER: (435) 722-2531

10 FIELD AND POOL, OR WILDCAT: Antelope Creek

4 LOCATION OF WELL

FOOTAGES AT SURFACE: 2500' FNL, 550' FEL

COUNTY: Duchesne

QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN: SENE 5 5S 3W U

STATE: UTAH

11 CHECK APPROPRIATE BOXES TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA

TYPE OF SUBMISSION	TYPE OF ACTION		
☐ NOTICE OF INTENT (Submit in Duplicate)	☐ ACIDIZE	☐ DEEPEN	☑ REPERFORATE CURRENT FORMATION
Approximate date work will start:	☐ ALTER CASING	☐ FRACTURE TREAT	☐ SIDETRACK TO REPAIR WELL
	☐ CASING REPAIR	☐ NEW CONSTRUCTION	☐ TEMPORARILY ABANDON
	☐ CHANGE TO PREVIOUS PLANS	☐ OPERATOR CHANGE	☐ TUBING REPAIR
	☐ CHANGE TUBING	☐ PLUG AND ABANDON	☐ VENT OR FLARE
☑ SUBSEQUENT REPORT (Submit Original Form Only)	☐ CHANGE WELL NAME	☐ PLUG BACK	☐ WATER DISPOSAL
Date of work completion: 2/5/2015	☐ CHANGE WELL STATUS	☐ PRODUCTION (START/RESUME)	☐ WATER SHUT-OFF
	☐ COMMINGLE PRODUCING FORMATIONS	☐ RECLAMATION OF WELL SITE	☐ OTHER
	☐ CONVERT WELL TYPE	☐ RECOMPLETE - DIFFERENT FORMATION	

12 DESCRIBE PROPOSED OR COMPLETED OPERATIONS. Clearly show all pertinent details including dates, depths, volumes, etc

On 1/26/2015 we rigged up on the well to address a loss of mechanical integrity. We released packer, pulled the tubing and scan logged on the way out. We laid down the whole string. We picked up new tubing, made a bit and scraper run past all perforations, circulated and cleaned the well. We then perforated within the permitted injection interval of 3,973'-5,554' the following: 5,474'-87', 5,458'-64', 5,443'-48', 5,436'-40', 5,410'-16', 5,398'-5,403', 5,359'-66', 5,292'-5,300', 4,926'-34', 4,920'-22', 4,913'-17', 4,764'-72', 4,498'-4,504', 4,490'-93' & 4,480'-88'. We isolated various intervals and tested their injection rates and had mixed results. We pulled all tools and ran in with a new Arrowset 1 Packer and new tubing, breaking and doping all joints on the way in. We had trouble getting a successful MIT on the casing and pulled out until a successful test was obtained. We initially thought were too far from the top perforation to set the packer but a re-tally of the tubing revealed we were only 60' above the top perforation. The top perforation is at 4,283' and the packer was set at 4,223'. This was verified with a wireline before charting a successful MIT test on the casing to 1900 psi with no loss. Perforations were made using were Titan 3-1/8" guns containing 11 grams charges, 0.36" EHD, 16.33" TTP, 4 SPF @ 120° Phased. Injection will resume after appropriate approval is granted.

NAME (PLEASE PRINT): Rodrigo Jurado

TITLE: Regulatory Compliance Specialist

SIGNATURE:

DATE: 2/16/2015

(This space for State use only)

(5/2000)

(See Instructions on Reverse Side)

Mechanical Integrity Test
Tubing/Casing Annulus Pressure Test

U.S. Environmental Protection Agency
Underground Injection Control Program
1595 Wynkoop Street, Denver, CO 80202

EPA Witness: _____ Date: 2 / 9 / 15
Test conducted by: CHAD STEVENSON
Others present: _____

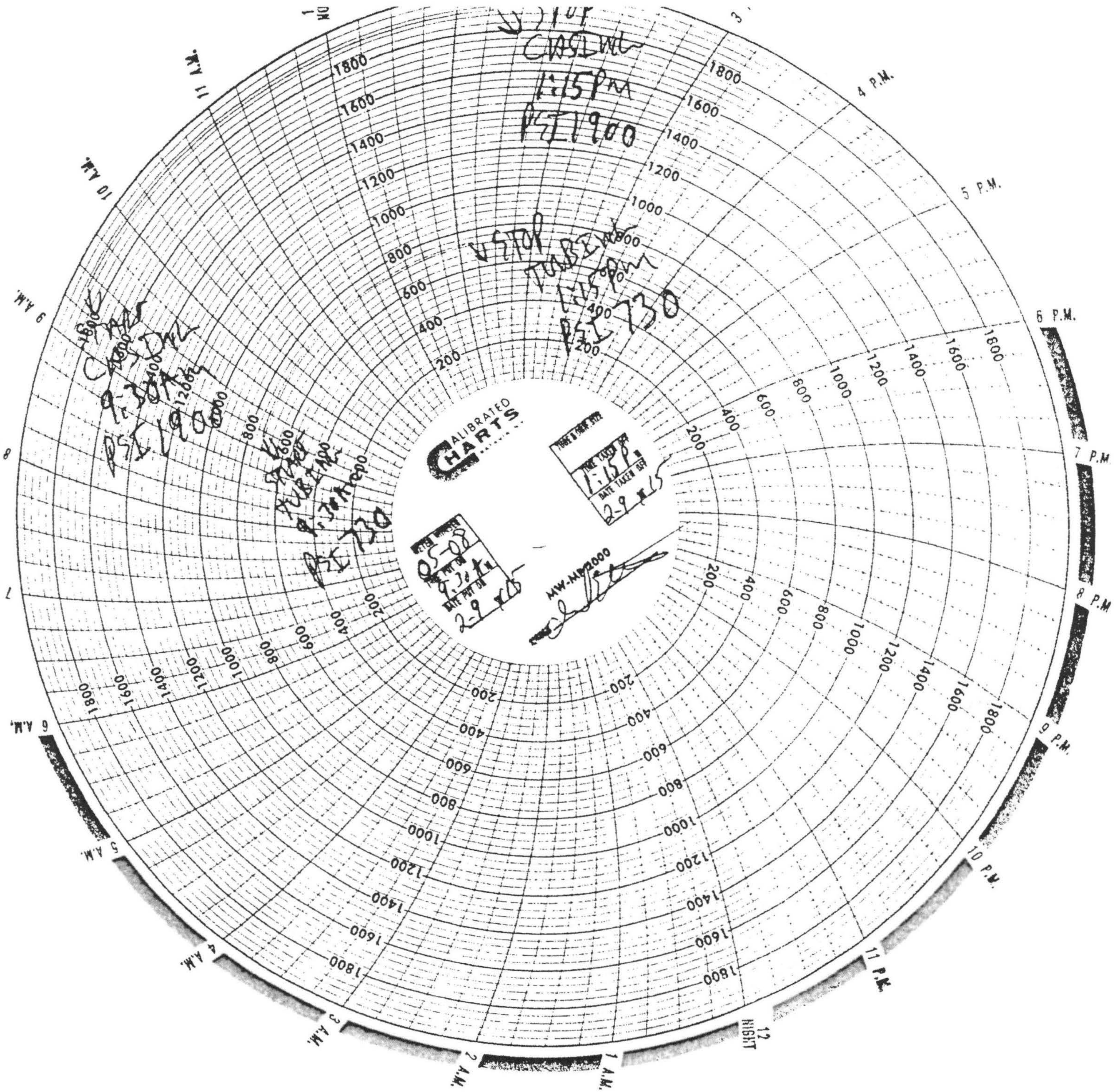
Well Name: 05-08 Type: ER SWD **Status:** AC TA UC
Field: ANTELOPE CREEK
Location: 05-08 Sec: ___ T ___ N / S R ___ E / W County: DUCHESNE State: UT
Operator: PETROGLYPH ENERGY
Last MIT: / / **Maximum Allowable Pressure:** _____ **PSIG**

Regularly scheduled test? [ ] Yes [ ] No
Initial test for permit? [ ] Yes [ ] No
Test after well rework? [X] Yes [ ] No

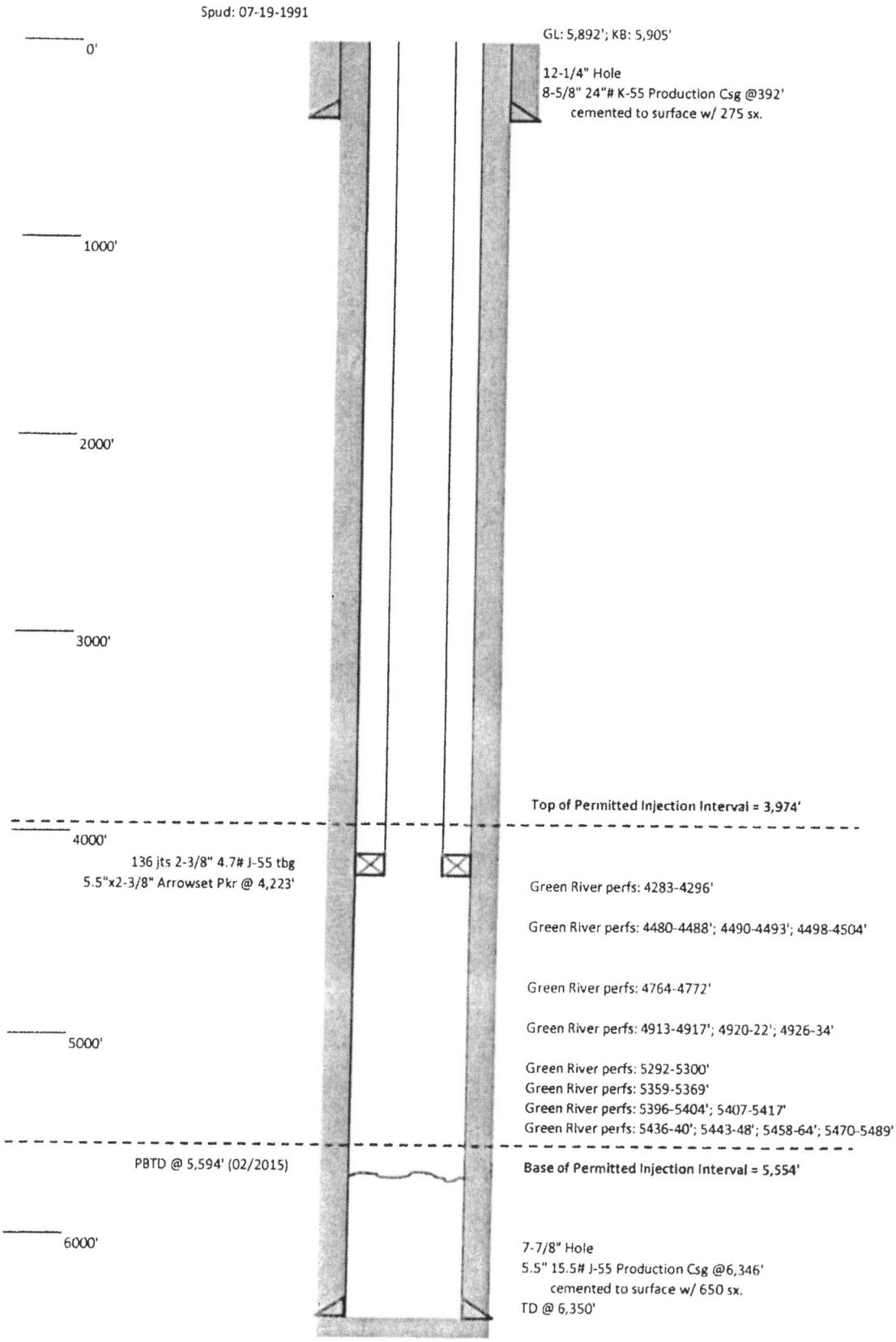
Well injecting during test? If Yes, rate: _____ **bpd**
Pre-test annulus pressure: _____ **psig**

MIT DATA TABLE	Test #1	Test #2	Test #3
TUBING		**PRESSURE RECORD**	
Initial Pressure	730 psig	psig	psig
End of test pressure	730 psig	psig	psig
CASING / TUBING ANNULUS		**PRESSURE RECORD**	
0 minutes	1901 psig	psig	psig
5 minutes	1901 psig	psig	psig
10 minutes	1900 psig	psig	psig
15 minutes	1901 psig	psig	psig
20 minutes	1901 psig	psig	psig
25 minutes	1901 psig	psig	psig
30 minutes	1900 psig	psig	psig
3 1/2 HOURS ~~minutes~~	1901 psig	psig	psig
_____ minutes	psig	psig	psig
RESULT	[ ] Pass [ ] Fail	[ ] Pass [ ] Fail	[ ] Pass [ ] Fail

Does the annulus pressure build back up after the test ? If Yes, _____ psig.


CALIBRATED CHARTS
MW-MP2000
PRINTED IN U.S.A.
STOP CASING 1:15PM PSI 1900
STOP TUBING 1:15PM PSI 730
START CASING 9:30A PSI 1900
START TUBING 9:30A PSI 730
TIME PUT ON 9:30A
DATE PUT ON 2-9-15
TIME TAKEN OFF 1:15P
DATE TAKEN OFF 2-9-15

Petroglyph Operating Company, Inc.
Ute Tribal 05-08 Injector
UIC Permit # UT2736-04324
WBD Updated: 02/10/2015



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 8
1595 Wynkoop Street
DENVER, CO 80202-1129
Phone 800-227-8917
http://www.epa.gov/region08

NOV 0 7 2014

Ref: 8ENF-UFO

CERTIFIED MAIL 7008-3230-0003-0724-9417
RETURN RECEIPT REQUESTED

Mr. Les Farnsworth, District Supervisor
Petroglyph Operating Company, Inc.
4116 W 3000 S Ioka Lane
P.O. Box 607
Roosevelt, UT 84066

Re: Underground Injection Control (UIC)
Notice of Violation:
Loss of Mechanical Integrity
Ute Tribal 05-08 Well
EPA Well ID# UT20736-04324
API # 43-013-31306
Antelope Creek Oil Field
Duchesne County, UT

Dear Mr. Farnsworth:

On October 29, 2014, the Environmental Protection Agency learned that the Petroglyph Operating Company, Inc. injection well referenced above lost mechanical integrity on October 19, 2014. Pursuant to the above-referenced UIC Permit and Title 40 of the Code of Federal Regulations Section 144.51(q)(1) (40 C.F.R. § 144.51(q)(1)), you must establish and maintain mechanical integrity. A loss of mechanical integrity is a violation of this requirement.

Pursuant to the above-referenced UIC Permit and the regulations at 40 C.F.R. § 144.51(q)(2), you must immediately cease injection into this well. Before injection may resume, you must demonstrate that the well has mechanical integrity by passing a mechanical integrity test (MIT). You must also receive written authorization from the EPA.

Within thirty (30) days of receipt of this letter, please submit a letter describing what action you intend to take regarding the well, including a time frame in which you anticipate the work to be completed. It is expected that you will return this well to compliance within ninety (90) days of the loss of mechanical integrity.

If you choose to plug and abandon this well, a plugging and abandonment plan must be submitted to the EPA for approval prior to the plugging operation.

Failure to comply with the UIC regulations found at 40 C.F.R. Parts 144 through 148 constitutes one or more violations of the Safe Drinking Water Act, 42 U.S.C. § 300h. Such non-compliance may subject you to formal enforcement by the EPA, as codified at 40 C.F.R. Part 22.

If you have any questions concerning this letter, you may contact Don Breffle at (303) 312-6198. Please direct all correspondence to the attention of Don Breffle at Mail Code 8ENF-UFO.

Sincerely,

Arturo Palomares, Director
Water Technical Enforcement Program
Office of Enforcement, Compliance
and Environmental Justice

cc: Gordon Howell, Chairman, Uintah & Ouray Business Committee
Ronald Wopsock, Vice-Chairman, Uintah & Ouray Business Committee
Reannin Tapoof, Executive Assistant, Uintah & Ouray Business Committee
Stewart Pike, Councilman, Uintah & Ouray Business Committee
Tony Small, Councilman, Uintah & Ouray Business Committee
Bruce Ignacio, Councilman, Uintah & Ouray Business Committee
Phillip Chimburas, Councilman, Uintah & Ouray Business Committee
Manuel Myore, Director of Energy, Minerals and Air Programs
John Rogers, Associate Director, Oil & Gas, Utah Division of Oil, Gas and Mining

Multi-Chem Analytical Laboratory
1553 East Highway 40
Vernal, UT 84078

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Units of Measurement: **Standard**

Water Analysis Report

Production Company:	**PETROGLYPH OPERATING CO INC - EBUS**	Sales Rep:	**James Patry**
Well Name:	**PETROGLYPH U.T. 05-08, DUCHESNE**	Lab Tech:	**Michele Pike**
Sample Point:	**Well Head**		
Sample Date:	**1/6/2016**		
Sample ID:	**WA-327694**		

Scaling potential predicted using ScaleSoftPitzer from Brine Chemistry Consortium (Rice University)

Sample Specifics

Test Date:	1/14/2016
System Temperature 1 (°F):	60
System Pressure 1 (psig):	2000
System Temperature 2 (°F):	180
System Pressure 2 (psig):	50
Calculated Density (g/ml):	1.0022
pH:	6.50
Calculated TDS (mg/L):	6986.83
CO2 in Gas (%):	
Dissolved CO_2 (mg/L)):	80.00
H_2S in Gas (%):	
H2S in Water (mg/L):	0.00
Tot. SuspendedSolids(mg/L):	
Corrosivity(LangliерSat.Indx)	0.00
Alkalinity:	

Analysis @ Properties in Sample Specifics

Cations	*mg/L*	*Anions*	*mg/L*
Sodium (Na):	2226.38	Chloride (Cl):	3000.00
Potassium (K):	4.67	Sulfate (SO_4):	510.00
Magnesium (Mg):	70.24	Bicarbonate (HCO_3):	976.00
Calcium (Ca):	166.00	Carbonate (CO_3):	
Strontium (Sr):	4.85	Acetic Acid (CH_3COO)	
Barium (Ba):	0.58	Propionic Acid (C_2H_5COO)	
Iron (Fe):	1.96	Butanoic Acid (C_3H_7COO)	
Zinc (Zn):	0.39	Isobutyric Acid ($(CH_3)_2CHCOO$)	
Lead (Pb):	0.48	Fluoride (F):	
Ammonia NH_3:		Bromine (Br):	
Manganese (Mn):	0.04	Silica (SiO_2):	25.24
Aluminum (Al):	0.11	Calcium Carbonate ($CaCO_3$):	
Lithium (Li):	0.63	Phosphates (PO_4):	2.73
Boron (B):	0.19	Oxygen (O_2):	
Silicon (Si):	11.80		

Notes:

(PTB = Pounds per Thousand Barrels)

		Calcium Carbonate		Barium Sulfate		Iron Sulfide		Iron Carbonate		Gypsum CaSO4·2H2O		Celestite SrSO4		Halite NaCl		Zinc Sulfide	
Temp (°F)	PSI	SI	PTB	SI	PTB	SI	PTB	SI	PTB	SI	PTB	SI	PTB	SI	PTB	SI	PTB
180.00	50.00	0.44	52.84	0.61	0.26	0.00	0.00	0.65	1.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
167.00	267.00	0.27	34.18	0.63	0.26	0.00	0.00	0.46	0.93	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
153.00	483.00	0.17	21.25	0.66	0.27	0.00	0.00	0.33	0.75	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
140.00	700.00	0.06	8.21	0.69	0.28	0.00	0.00	0.20	0.51	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
127.00	917.00	0.00	0.00	0.74	0.28	0.00	0.00	0.06	0.19	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
113.00	1133.00	0.00	0.00	0.81	0.29	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
100.00	1350.00	0.00	0.00	0.88	0.30	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
87.00	1567.00	0.00	0.00	0.97	0.31	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
73.00	1783.00	0.00	0.00	1.08	0.32	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
60.00	2000.00	0.00	0.00	1.20	0.32	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

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Vernal, UT 84078

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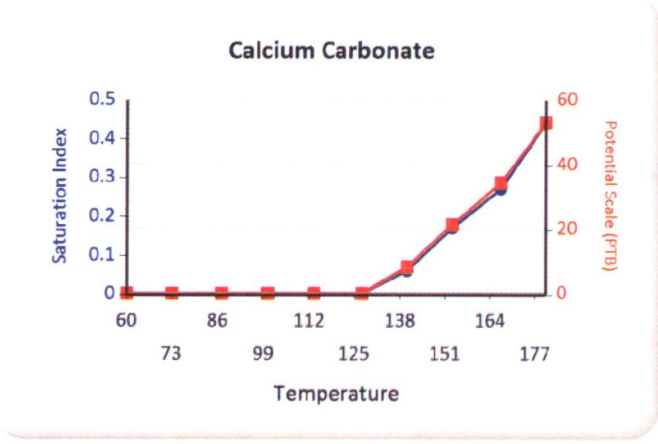
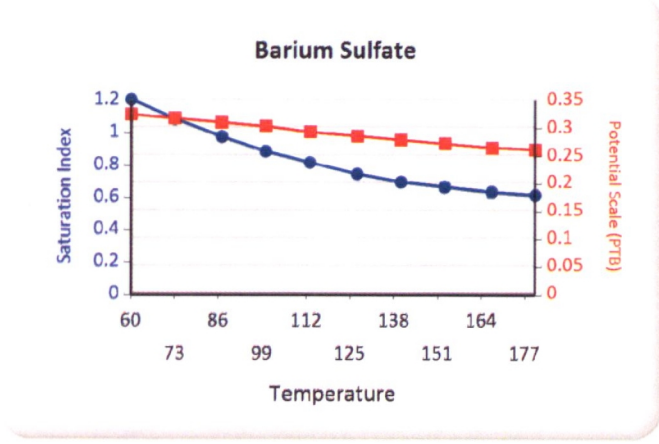
Water Analysis Report

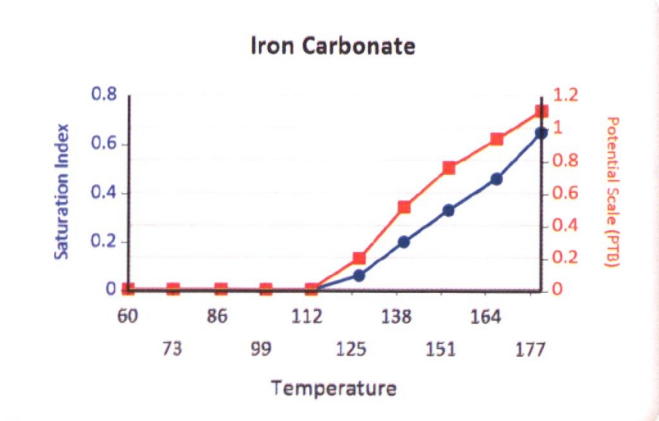
		Hemihydrate CaSO4~0.5H2O		Anhydrate CaSO4		Calcium Fluoride		Zinc Carbonate		Lead Sulfide		Mg Silicate		Ca Mg Silicate		Fe Silicate	
Temp (°F)	PSI	SI	PTB	SI	PTB	SI	PTB	SI	PTB	SI	PTB	SI	PTB	SI	PTB	SI	PTB
180.00	50.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.34	0.34
167.00	267.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
153.00	483.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
140.00	700.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
127.00	917.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
113.00	1133.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
100.00	1350.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
87.00	1567.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
73.00	1783.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
60.00	2000.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

These scales have positive scaling potential under initial temperature and pressure: Calcium Carbonate Barium Sulfate Iron Carbonate Fe Silicate

These scales have positive scaling potential under final temperature and pressure: Barium Sulfate







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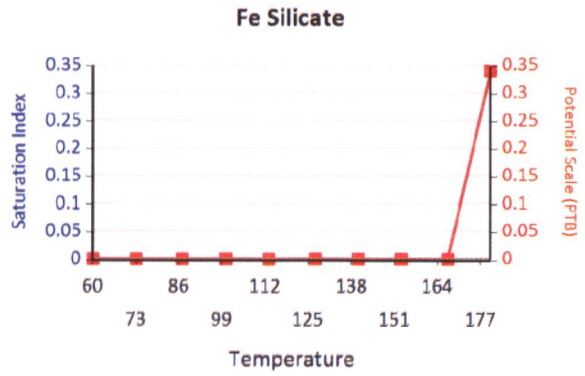


PETROGLYPH EXECUTIVE OFFICES

February 10, 2016

Underground Injection Control Enforcement
U.S. Environmental Protection Agency
Atten: Don Breffle / Gary Wang
1595 Wynkoop St.
Denver, CO 80202

Mr. Breffle and Mr. Wang:

Please find enclosed the following annual reporting materials from Petroglyph Operating Company, Inc., for its Antelope Creek Water Flood Program, Permit Number UT2736-00000:

- Annual Disposal/Injection Well Monitoring Report for each of the 111 wells
- Related supporting documentation, to include copies of notices and successful Mechanical Integrity Tests
- Water Analysis reports

During 2015, POCI experienced a loss of mechanical integrity in the following wells:

- Ute Tribal 05-08
- Ute Tribal 05-10
- Ute Tribal 19-11
- Ute Tribal 21-04
- Ute Tribal 21-15
- Ute Tribal 29-12
- Ute Tribal 33-14D3

All wells were subsequently repaired and passed a Mechanical Integrity Test. Approvals were received for all wells.

Maximum Allowable Injection Pressure was exceeded for the Ute Tribal 16-07 (October 2015), Ute Tribal 18-14 (August 2015), Ute Tribal 29-12 (May-June 2015) as a result of performing step rate tests.

Thank you for your time. If any questions, please contact me at the following number: (208) 685-9711.

Best Regards,

Nicole Colby

Nicole Colby
Manager, Land & Regulatory Compliance; Petroglyph Energy, Inc.

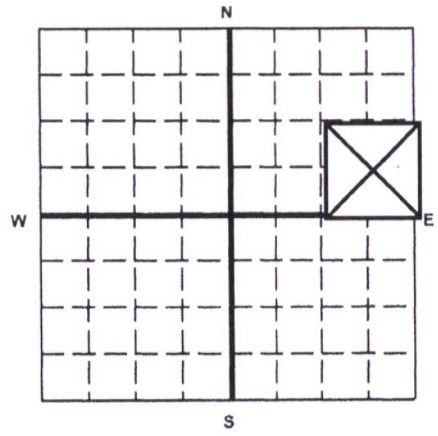
OMB No. 2040-0042 Approval Expires 12/31/2011

United States Environmental Protection Agency
Washington, DC 20460

EPA ANNUAL DISPOSAL/INJECTION WELL MONITORING REPORT

Name and Address of Existing Permittee	Name and Address of Surface Owner
Petroglyph Operating Company, Inc. 2258 P.O. Box 7608 Boise, Idaho 83709	Ute Indian Tribe P.O. Box 70 Ft. Duchesne, Utah 84026

Locate Well and Outline Unit on Section Plat - 640 Acres



State	County	Permit Number
Utah	Duchesne	UT2736-04324

Surface Location Description

___ 1/4 of ___ 1/4 of SE 1/4 of NE 1/4 of Section 5 Township 5S Range 3W

Locate well in two directions from nearest lines of quarter section and drilling unit

Surface Location 2500 ft. frm (N/S) N Line of quarter section and 550 ft. from (E/W) E Line of quarter section.

WELL ACTIVITY
- [ ] Brine Disposal
- [X] Enhanced Recovery
- [ ] Hydrocarbon Storage

TYPE OF PERMIT
- [ ] Individual
- [X] Area

Number of Wells 111

Lease Name Ute Indian Tribe Well Number UTE TRIBAL 05-08

		INJECTION PRESSURE		TOTAL VOLUME INJECTED		TUBING -- CASING ANNULUS PRESSURE (OPTIONAL MONITORING)	
MONTH	YEAR	AVERAGE PSIG	MAXIMUM PSIG	BBL	MCF	MINIMUM PSIG	MAXIMUM PSIG
January	14	1949	2022	68		0	0
February	14	1979	2021	16		0	0
March	14	1783	1990	37		0	0
April	14	1979	2003	44		0	0
May	14	1831	2003	76		0	0
June	14	1996	2016	82		0	0
July	14	1988	2021	90		0	0
August	14	1863	2020	~~89~~	60 inj monthly	0	0
September	14	1904	1998	46		0	0
October	14	1950	1973	45		0	1860
November	14	920	1896	0		0	1500
December	14	1663	1668	0		0	1620

Certification

I certify under the penalty of law that I have personally examined and am familiar with the information submitted in this document and all attachments and that, based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the information is true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment. (Ref. 40 CFR 144.32)

Name and Official Title *(Please type or print)*	Signature	Date Signed
Chad Stevenson, Water Facilities Supervisor		2/10/2015

EPA Form 7520-11 (Rev. 12-08)

U2 Entered
Date 3/20/15
Initial GW

TAB	GREEN	BLUE	CBI
		2	

Petroglyph Operating Company, Inc.
Annulus Pressure Cause and Mitigation Measures
2014 EPA Annual Injection Report

Well Name: Ute Tribal 05-08

UIC Permit Number: UT2736-04324

API Number: 43-013-31306

Cause of Pressure and Mitigation Measures:
This well lost Mechanical Integrity during the month of October and injection immediately ceased. In January a Rig was moved in to perform workover operations. Following workover and testing operations an MIT was performed and submitted for approval to resume injection. All pressures reported are related to the Loss of Mechanical Integrity and the Mechanical Integrity Test.

PETROGLYPH

October 21, 2013

Don Breffle
Mail Code: 8ENF-UFO
US EPA Region 8
1595 Wyncoop Street
Denver, CO 80202-1129

RE: Underground Injection Control (UIC)
Notice of Violation
Loss of Mechanical Integrity
EPA Permit #UT2736-04324
Well No. Ute Tribal 05-08
Antelope Creek Oil Field
Duchesne County, Utah

Dear Mr. Breffle:

Please be advised that on October 19, 2014 we lost Mechanical Integrity on the Ute Tribal 05-08 Injection Well. My direct number is 435-722-5302 if you wish to contact us.

Sincerely,
Petroglyph Operating Company, Inc.

Rodrigo Jurado
Regulatory Compliance Specialist

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 8
1595 Wynkoop Street
DENVER, CO 80202-1129
Phone 800-227-8917
http://www.epa.gov/region08

NOV 0 7 2014

Ref: 8ENF-UFO

CERTIFIED MAIL 7008-3230-0003-0724-9417
RETURN RECEIPT REQUESTED

Mr. Les Farnsworth, District Supervisor
Petroglyph Operating Company, Inc.
4116 W 3000 S Ioka Lane
P.O. Box 607
Roosevelt, UT 84066

Re: Underground Injection Control (UIC)
Notice of Violation:
Loss of Mechanical Integrity
Ute Tribal 05-08 Well
EPA Well ID# UT20736-04324
API # 43-013-31306
Antelope Creek Oil Field
Duchesne County, UT

Dear Mr. Farnsworth:

On October 29, 2014, the Environmental Protection Agency learned that the Petroglyph Operating Company, Inc. injection well referenced above lost mechanical integrity on October 19, 2014. Pursuant to the above-referenced UIC Permit and Title 40 of the Code of Federal Regulations Section 144.51(q)(1) (40 C.F.R. § 144.51(q)(1)), you must establish and maintain mechanical integrity. A loss of mechanical integrity is a violation of this requirement.

Pursuant to the above-referenced UIC Permit and the regulations at 40 C.F.R. § 144.51(q)(2), you must immediately cease injection into this well. Before injection may resume, you must demonstrate that the well has mechanical integrity by passing a mechanical integrity test (MIT). You must also receive written authorization from the EPA.

Within thirty (30) days of receipt of this letter, please submit a letter describing what action you intend to take regarding the well, including a time frame in which you anticipate the work to be completed. It is expected that you will return this well to compliance within ninety (90) days of the loss of mechanical integrity.

If you choose to plug and abandon this well, a plugging and abandonment plan must be submitted to the EPA for approval prior to the plugging operation.

Failure to comply with the UIC regulations found at 40 C.F.R. Parts 144 through 148 constitutes one or more violations of the Safe Drinking Water Act, 42 U.S.C. § 300h. Such non-compliance may subject you to formal enforcement by the EPA, as codified at 40 C.F.R. Part 22.

If you have any questions concerning this letter, you may contact Don Breffle at (303) 312-6198. Please direct all correspondence to the attention of Don Breffle at Mail Code 8ENF-UFO.

Sincerely,

Arturo Palomares, Director
Water Technical Enforcement Program
Office of Enforcement, Compliance
and Environmental Justice

cc: Gordon Howell, Chairman, Uintah & Ouray Business Committee
Ronald Wopsock, Vice-Chairman, Uintah & Ouray Business Committee
Reannin Tapoof, Executive Assistant, Uintah & Ouray Business Committee
Stewart Pike, Councilman, Uintah & Ouray Business Committee
Tony Small, Councilman, Uintah & Ouray Business Committee
Bruce Ignacio, Councilman, Uintah & Ouray Business Committee
Phillip Chimburas, Councilman, Uintah & Ouray Business Committee
Manuel Myore, Director of Energy, Minerals and Air Programs
John Rogers, Associate Director, Oil & Gas, Utah Division of Oil, Gas and Mining

Rodrigo Jurado

From: Rodrigo Jurado
Sent: Monday, January 26, 2015 12:26 PM
To: breffle.don@epa.gov
Subject: Petroglyph's Ute Tribal 05-08 Injector

Mr. Breffle,
As we discussed previously, Petroglyph Operating plans to work-over and re-perforate the Ute Tribal 05-08 Injector. At this time a decision has not been made as to whether existing perforations will be acidized or not; but here is our tentative work-over plan:
Petroglyph Operating plans to work-over and re-perforate the referenced well. We plan to pull all tubing and packers, scan log on the way out, lay down all bad pipe, make a bit and scraper run to PBTD, circulate the well and re-perforate at at the following depths: 5474-87, 5458-64, 5443-48, 5436-40, 5410-16, 5398-5403 & 5359-66. New perforations will be made at: 5292-5300, 4920-22, 4313-17, 4926-34, 4764-72, 4498-4504, 4490-93 & 4480-88. We will break down perfs, test their injection rates, run in with an Arrowset 1 Packer and perform a Mechanical Integrity Test. Injection will resume after EPA Approval is received.
Equipment has been moved on location and work is underway. We will submit a detailed subsequent report to you, along with a Mechanical Integrity Test as soon as work is completed and data is gathered.
Thanks,
Rodrigo Jurado
Petroglyph Operating Company, Inc.
Regulatory Compliance Specialist
P.O. BOX 607
Roosevelt, UT 84066
OFFICE: (435) 722-5302
MOBILE: (435) 609-3239
FAX: (435) 722-9145

February 10, 2015

EPA
ATTN: Don Breffle
Region 8
1595 Wyncoop Street
Denver, CO 80202-8917

UIC Permit #UT2736-04324
Well ID: Ute Tribal 05-08
Ute Tribal No. 05-08, Duchesne County, Utah

Dear Mr. Breffle,

Please find enclosed the successful MIT test and Wellbore Schematic for the above referenced well. This test was performed to provide proof of integrity after rigged up on the well to address a loss of mechanical integrity. The Wellbore Schematic provides proof of the injection packer's set depth; following the operations described below.

We rigged up on the well to address a loss of mechanical integrity. We released packer, pulled the tubing and scan logged on the way out. We laid down the whole string. We picked up new tubing, made a bit and scraper run past all perforations, circulated and cleaned the well. We then perforated within the permitted injection interval of 3,973'-5,554' the following: 5,474'-87', 5,458'-64', 5,443'-48', 5,436'-40', 5,410'-16', 5,398'-5,403', 5,359'-66', 5,292'-5,300', 4,926'-34', 4,920'-22', 4,913'-17', 4,764'-72', 4,498'-4,504', 4,490'-93' & 4,480'-88'. We isolated various intervals and tested their injection rates with mixed results. We pulled all tools and ran in with a new Arrowset 1 Packer and new tubing, breaking and doping all joints on the way in. We had trouble getting a successful MIT on the casing and pulled out until a successful test was obtained. We initially thought were too far from the top perforation to set the packer but a re-tally of the tubing revealed we were only 60' above the top perforation. The top perforation is at 4,283' and the packer was set at 4,223'. This was verified with a wireline before charting a successful MIT test on the casing to 1900 psi with no loss. Perforations were made using were Titan 3-1/8" guns containing 11 grams charges, 0.36" EHD, 16.33" TTP, 4 SPF @ 120° Phased.

Please let us know if there is a need for further action on our part and we will immediately comply. My direct number is 435-722-5302 if you wish to contact us.

Sincerely,

Rodrigo Jurado
Regulatory Compliance Spc

Encl: MIT & Wellbore Schematic

Mechanical Integrity Test
Tubing/Casing Annulus Pressure Test

U.S. Environmental Protection Agency
Underground Injection Control Program
1595 Wynkoop Street, Denver, CO 80202

EPA Witness: _____ Date: 2/9/15
Test conducted by: CHAD STEVENSON
Others present: _____

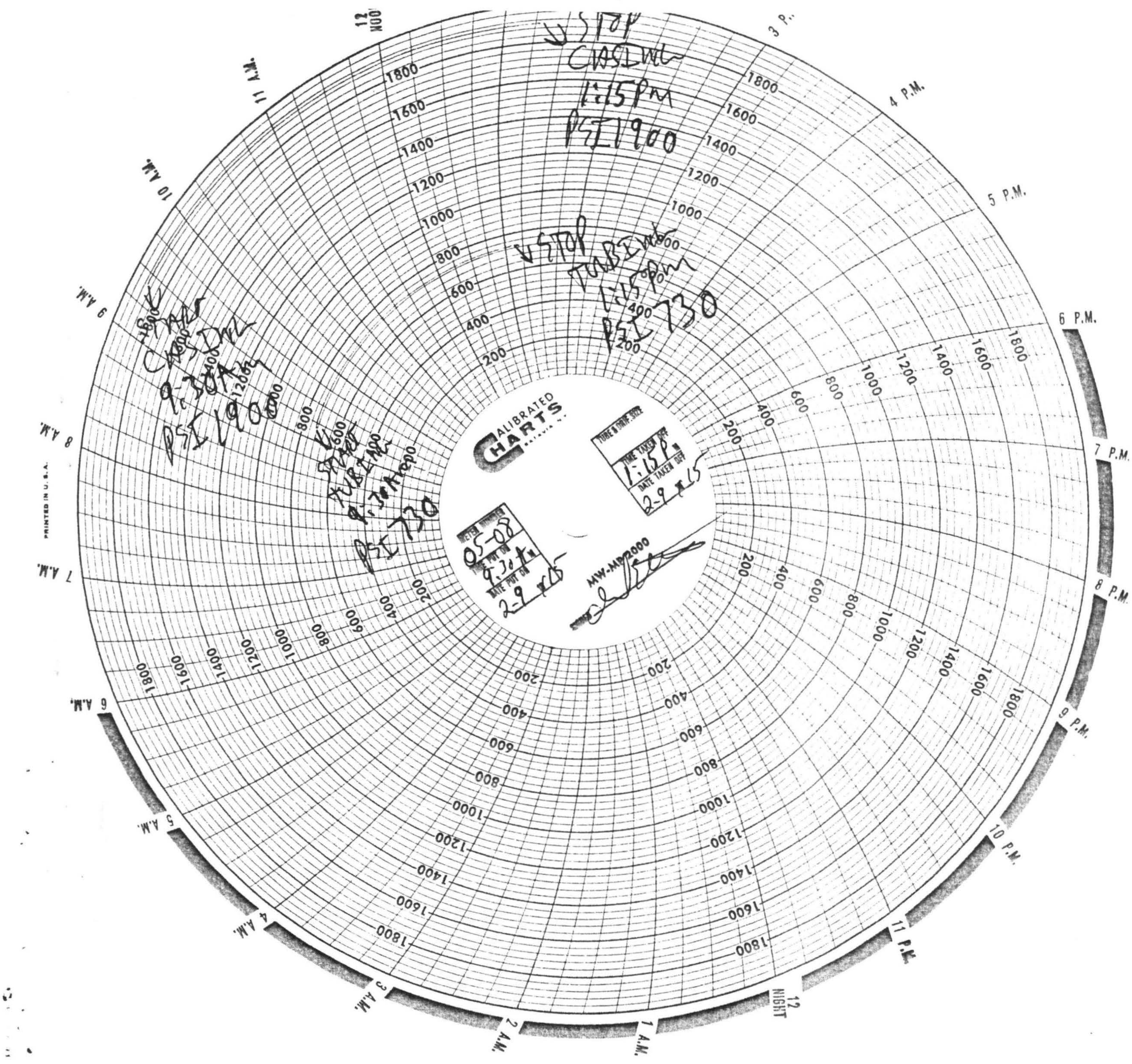
Well Name: 05-08 Type: ER SWD **Status:** AC TA UC
Field: ANTELOPE CREEK
Location: 05-08 Sec: ___ T ___ N / S R ___ E / W County: DUCHESNE State: UT
Operator: PETROGLYPH ENERGY
Last MIT: ___/___/___ **Maximum Allowable Pressure:** _____ **PSIG**

Regularly scheduled test? [ ] Yes [ ] No
Initial test for permit? [ ] Yes [ ] No
Test after well rework? [X] Yes [ ] No

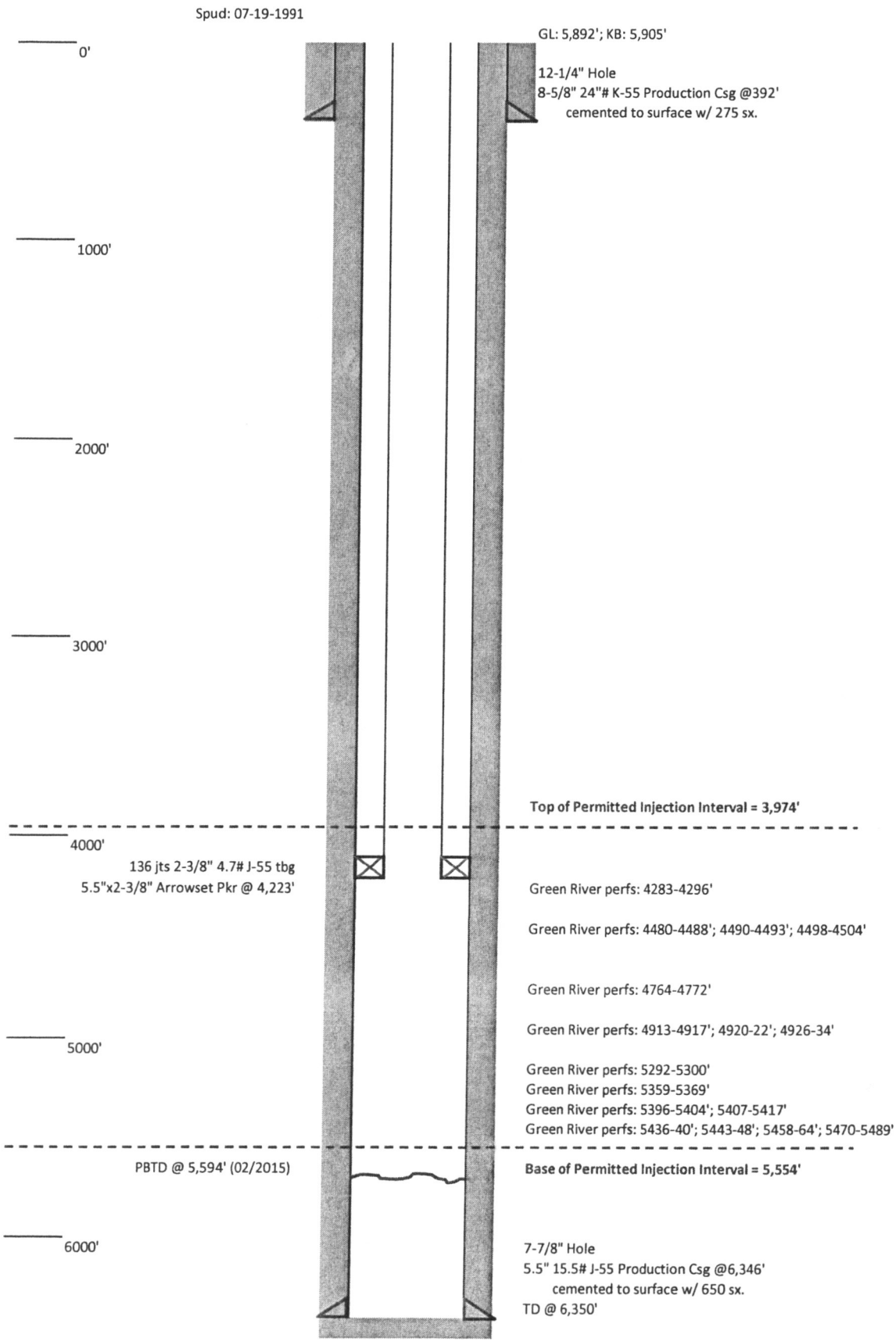
Well injecting during test? If Yes, rate: _____ **bpd**
Pre-test annulus pressure: _____ **psig**

MIT DATA TABLE	Test #1	Test #2	Test #3
TUBING PRESSURE RECORD			
Initial Pressure	730 psig	psig	psig
End of test pressure	720 psig	psig	psig
CASING / TUBING ANNULUS PRESSURE RECORD			
0 minutes	1900 psig	psig	psig
5 minutes	1901 psig	psig	psig
10 minutes	1900 psig	psig	psig
15 minutes	1900 psig	psig	psig
20 minutes	1901 psig	psig	psig
25 minutes	1901 psig	psig	psig
30 minutes	1900 psig	psig	psig
3 1/2 HOURS ~~minutes~~	1901 psig	psig	psig
_____ minutes	psig	psig	psig
RESULT	[ ] Pass [ ] Fail	[ ] Pass [ ] Fail	[ ] Pass [ ] Fail

Does the annulus pressure build back up after the test ? If Yes, _____ psig.


CALIBRATED CHARTS
METER NUMBER 05-08
TIME PUT ON 9:30 A.M.
DATE PUT ON 2-9-15
TUBE & ORIF. SIZE
TIME TAKEN OFF 1:15 P.M.
DATE TAKEN OFF 2-9-15
MW-MP2000
START CASING 9:30AM PSI 1900
START TUBING 9:30AM PSI 730
STOP CASING 1:15PM PSI 1900
STOP TUBING 1:15PM PSI 730
PRINTED IN U.S.A.

Petroglyph Operating Company, Inc.
Ute Tribal 05-08 Injector
UIC Permit # UT2736-04324
WBD Updated: 02/10/2015



Multi-Chem Analytical Laboratory
1553 East Highway 40
Vernal, UT 84078

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Units of Measurement: **Standard**

Water Analysis Report

Production Company:	**PETROGLYPH OPERATING CO INC - EBUS**	Sales Rep:	**James Patry**
Well Name:	**PETROGLYPH U.T. 05-08, DUCHESNE**	Lab Tech:	**Gary Winegar**
Sample Point:	**WELLHEAD**		
Sample Date:	**1/7/2015**		
Sample ID:	**WA-298187**		

Scaling potential predicted using ScaleSoftPitzer from Brine Chemistry Consortium (Rice University)

Sample Specifics	
Test Date:	1/21/2015
System Temperature 1 (°F):	160
System Pressure 1 (psig):	1300
System Temperature 2 (°F):	80
System Pressure 2 (psig):	15
Calculated Density (g/ml):	1.0015
pH:	7.90
Calculated TDS (mg/L):	6389.00
CO2 in Gas (%):	
Dissolved CO_2 (mg/L)):	16.00
H_2S in Gas (%):	
H2S in Water (mg/L):	5.00

Analysis @ Properties in Sample Specifics			
Cations	*mg/L*	*Anions*	*mg/L*
Sodium (Na):	1623.09	Chloride (Cl):	3000.00
Potassium (K):	26.88	Sulfate (SO_4):	320.00
Magnesium (Mg):	54.05	Bicarbonate (HCO_3):	1220.00
Calcium (Ca):	89.92	Carbonate (CO_3):	
Strontium (Sr):	4.49	Acetic Acid (CH_3COO)	
Barium (Ba):	4.08	Propionic Acid (C_2H_5COO)	
Iron (Fe):	13.02	Butanoic Acid (C_3H_7COO)	
Zinc (Zn):	6.60	Isobutyric Acid ($(CH_3)_2CHCOO$)	
Lead (Pb):	0.00	Fluoride (F):	
Ammonia NH_3:		Bromine (Br):	
Manganese (Mn):	0.12	Silica (SiO_2):	26.75

Notes:
B=3.32 Al=.04 Li=1.05

(PTB = Pounds per Thousand Barrels)

		Calcium Carbonate		Barium Sulfate		Iron Sulfide		Iron Carbonate		Gypsum CaSO4·2H2O		Celestite SrSO4		Halite NaCl		Zinc Sulfide	
Temp (°F)	PSI	SI	PTB	SI	PTB	SI	PTB	SI	PTB	SI	PTB	SI	PTB	SI	PTB	SI	PTB
80.00	14.00	1.21	53.65	1.93	2.40	3.56	4.54	2.23	9.39	0.00	0.00	0.00	0.00	0.00	0.00	11.43	3.45
88.00	157.00	1.18	51.40	1.85	2.39	3.44	4.54	2.23	9.39	0.00	0.00	0.00	0.00	0.00	0.00	11.20	3.45
97.00	300.00	1.20	52.66	1.77	2.39	3.39	4.54	2.28	9.40	0.00	0.00	0.00	0.00	0.00	0.00	11.05	3.45
106.00	443.00	1.23	53.99	1.70	2.38	3.35	4.54	2.34	9.41	0.00	0.00	0.00	0.00	0.00	0.00	10.91	3.45
115.00	585.00	1.26	55.38	1.63	2.37	3.32	4.54	2.39	9.41	0.00	0.00	0.00	0.00	0.00	0.00	10.78	3.45
124.00	728.00	1.29	56.81	1.58	2.37	3.30	4.54	2.45	9.42	0.00	0.00	0.00	0.00	0.00	0.00	10.66	3.45
133.00	871.00	1.33	58.25	1.52	2.36	3.29	4.54	2.51	9.43	0.00	0.00	0.00	0.00	0.00	0.00	10.55	3.45
142.00	1014.00	1.37	59.71	1.48	2.35	3.28	4.54	2.56	9.43	0.00	0.00	0.00	0.00	0.00	0.00	10.44	3.45
151.00	1157.00	1.41	61.16	1.44	2.34	3.27	4.54	2.61	9.44	0.00	0.00	0.00	0.00	0.00	0.00	10.35	3.45
160.00	1300.00	1.45	62.59	1.40	2.33	3.28	4.54	2.67	9.44	0.00	0.00	0.00	0.00	0.00	0.00	10.26	3.45

		Hemihydrate CaSO4~0.5H2O		Anhydrate CaSO4		Calcium Fluoride		Zinc Carbonate		Lead Sulfide		Mg Silicate		Ca Mg Silicate		Fe Silicate	
Temp (°F)	PSI	SI	PTB	SI	PTB	SI	PTB	SI	PTB	SI	PTB	SI	PTB	SI	PTB	SI	PTB
80.00	14.00	0.00	0.00	0.00	0.00	0.00	0.00	1.25	4.15	0.00	0.00	0.00	0.00	0.00	0.00	6.69	9.88
88.00	157.00	0.00	0.00	0.00	0.00	0.00	0.00	1.33	4.20	0.00	0.00	0.00	0.00	0.00	0.00	6.59	9.85
97.00	300.00	0.00	0.00	0.00	0.00	0.00	0.00	1.46	4.26	0.00	0.00	0.41	2.15	0.00	0.00	6.87	9.90
106.00	443.00	0.00	0.00	0.00	0.00	0.00	0.00	1.59	4.30	0.00	0.00	0.85	4.58	0.00	0.00	7.16	9.95
115.00	585.00	0.00	0.00	0.00	0.00	0.00	0.00	1.71	4.34	0.00	0.00	1.31	7.21	0.18	1.08	7.46	9.99
124.00	728.00	0.00	0.00	0.00	0.00	0.00	0.00	1.83	4.36	0.00	0.00	1.77	10.02	0.44	2.52	7.77	10.02
133.00	871.00	0.00	0.00	0.00	0.00	0.00	0.00	1.94	4.38	0.00	0.00	2.23	13.00	0.70	4.01	8.09	10.05
142.00	1014.00	0.00	0.00	0.00	0.00	0.00	0.00	2.05	4.39	0.00	0.00	2.70	16.07	0.97	5.55	8.42	10.07
151.00	1157.00	0.00	0.00	0.00	0.00	0.00	0.00	2.16	4.40	0.00	0.00	3.16	19.15	1.24	7.09	8.75	10.08
160.00	1300.00	0.00	0.00	0.00	0.00	0.00	0.00	2.26	4.41	0.00	0.00	3.63	22.11	1.51	8.59	9.09	10.09

Multi-Chem Analytical Laboratory
1553 East Highway 40
Vernal, UT 84078

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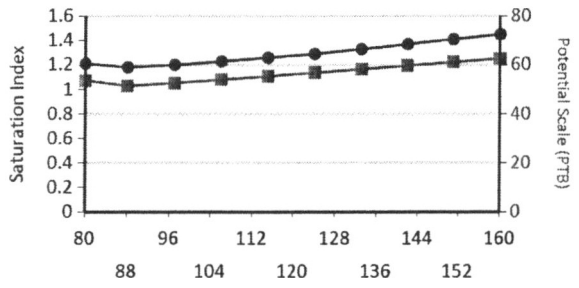
Water Analysis Report

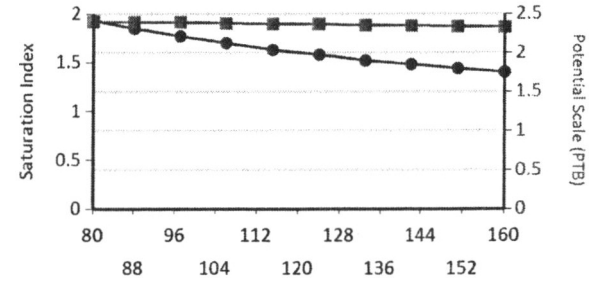
These scales have positive scaling potential under initial temperature and pressure: Calcium Carbonate Barium Sulfate Iron Sulfide Iron Carbonate Zinc Sulfide Zinc Carbonate Fe Silicate

These scales have positive scaling potential under final temperature and pressure: Calcium Carbonate Barium Sulfate Iron Sulfide Iron Carbonate Zinc Sulfide Zinc Carbonate Mg Silicate Ca Mg Silicate Fe Silicate

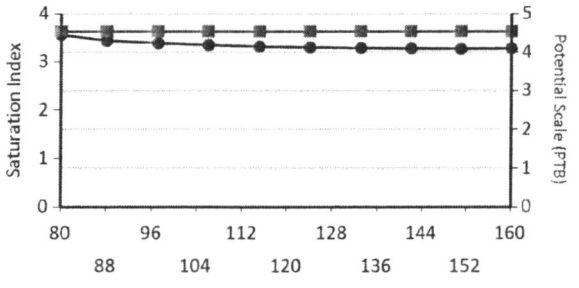
Calcium Carbonate



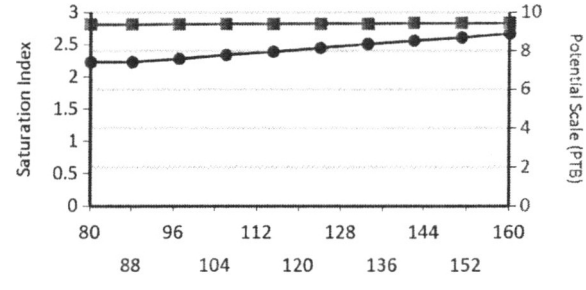
Barium Sulfate



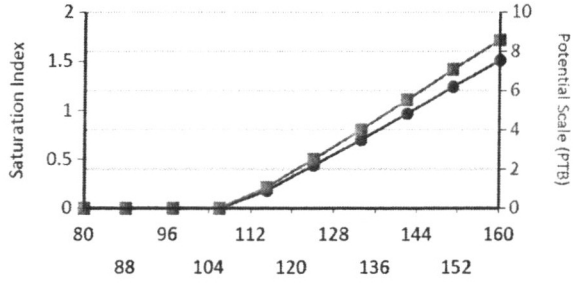
Iron Sulfide



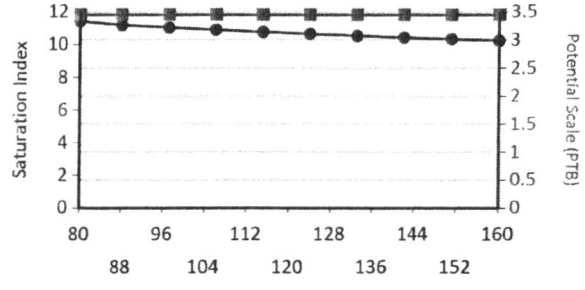
Iron Carbonate



Ca Mg Silicate



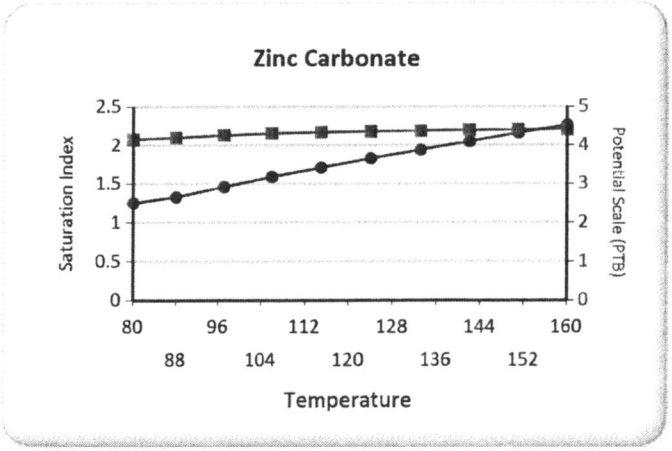
Zinc Sulfide

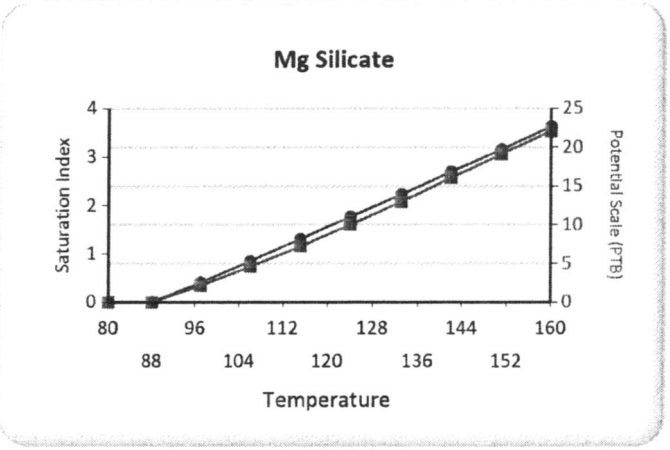


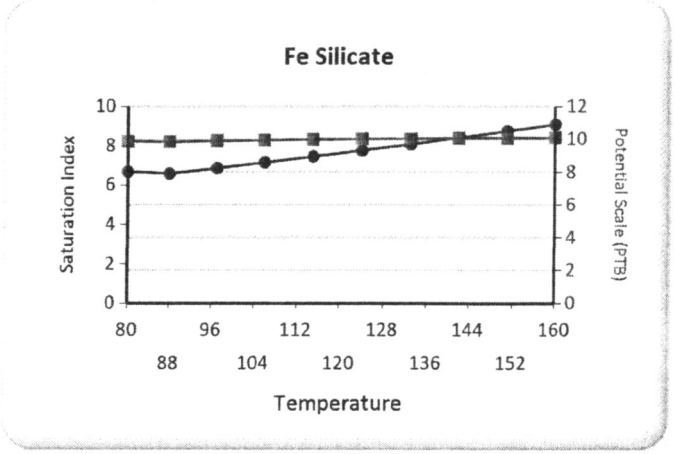
Multi-Chem Analytical Laboratory
1553 East Highway 40
Vernal, UT 84078

multi-chem®
A HALLIBURTON SERVICE

Water Analysis Report







PETROGLYPH

Petroglyph Operating Company, Inc.
4116 W. 3000 South Ioka Lane
Roosevelt, UT 84066

P.O. Box 607
Roosevelt, UT 84066

435-722-2531
435-722-9145 fax

February 11, 2015

Dear Sir or Madame,

Please see the enclosed Annual Disposal/Injection Well Monitoring Report for our Antelope Creek Water Flood Program, Permit Number UT2736-00000. During 2014, we had two wells lose mechanical integrity. Ute Tribal 33-14-D3 and Ute Tribal 05-05, permit numbers UT2736-04324 and UT2736-04420, respectively. Both wells have been repaired and passed a Mechanical Integrity Test. Approval to resume injection was granted for Ute Tribal 33-14-D3 and is pending for Ute Tribal 05-08.

Explanations of all other instances of a positive Casing/Annulus Pressure Readings have been provided in the supporting documents portion of this report.

Maximum Allowable Injection Pressure was not exceeded for any well during 2014.

Water samples were collected and analyzed for all wells in our Antelope Creek Waterflood Program and the Ute Tribal 04-07 SWD Well.

Please contact us if there is a need for any additional information or documentation. Our staff will be glad to answer any questions you might have.

Thank You,

Rodrigo Jurado
Regulatory Compliance Spc.
(435) 722-5302
rjurado@pgei.com

Encl: EPA Annual Injection Report, Supporting Documents & Water Analyses

February 10, 2015

EPA
ATTN: Don Breffle
Region 8
1595 Wyncoop Street
Denver, CO 80202-8917

UIC Permit #UT2736-04324
Well ID: Ute Tribal 05-08
Ute Tribal No. 05-08, Duchesne County, Utah

Dear Mr. Breffle,

Please find enclosed the successful MIT test and Wellbore Schematic for the above referenced well. This test was performed to provide proof of integrity after rigged up on the well to address a loss of mechanical integrity. The Wellbore Schematic provides proof of the injection packer's set depth; following the operations described below.

We rigged up on the well to address a loss of mechanical integrity. We released packer, pulled the tubing and scan logged on the way out. We laid down the whole string. We picked up new tubing, made a bit and scraper run past all perforations, circulated and cleaned the well. We then perforated within the permitted injection interval of 3,973'-5,554' the following: 5,474'-87', 5,458'-64', 5,443'-48', 5,436'-40', 5,410'-16', 5,398'-5,403', 5,359'-66', 5,292'-5,300', 4,926'-34', 4,920'-22', 4,913'-17', 4,764'-72', 4,498'-4,504', 4,490'-93' & 4,480'-88'. We isolated various intervals and tested their injection rates with mixed results. We pulled all tools and ran in with a new Arrowset 1 Packer and new tubing, breaking and doping all joints on the way in. We had trouble getting a successful MIT on the casing and pulled out until a successful test was obtained. We initially thought were too far from the top perforation to set the packer but a re-tally of the tubing revealed we were only 60' above the top perforation. The top perforation is at 4,283' and the packer was set at 4,223'. This was verified with a wireline before charting a successful MIT test on the casing to 1900 psi with no loss. Perforations were made using were Titan 3-1/8" guns containing 11 grams charges, 0.36" EHD, 16.33" TTP, 4 SPF @ 120° Phased.

Please let us know if there is a need for further action on our part and we will immediately comply. My direct number is 435-722-5302 if you wish to contact us.

Sincerely,

Rodrigo Jurado
Regulatory Compliance Spc

U2 Entered
Date 2/13/15
Initial DB

Encl: MIT & Wellbore Schematic

TAB	GREEN	BLUE	CBI
		2	

Mechanical Integrity Test
Tubing/Casing Annulus Pressure Test

U.S. Environmental Protection Agency
Underground Injection Control Program
1595 Wynkoop Street, Denver, CO 80202

EPA Witness: _____ Date: 2 / 9 / 15

Test conducted by: CHAD STEVENSON

Others present: _____

Well Name: 05-08 Type: ER SWD **Status: AC TA UC**

Field: ANTELOPE CREEK

Location: 05-08 Sec: ____ T ____ N / S R ____ E / W County: DUCHESNE State: UT

Operator: PETROGLYPH ENERGY

Last MIT: ____ / ____ / ____ **Maximum Allowable Pressure:** _____ **PSIG**

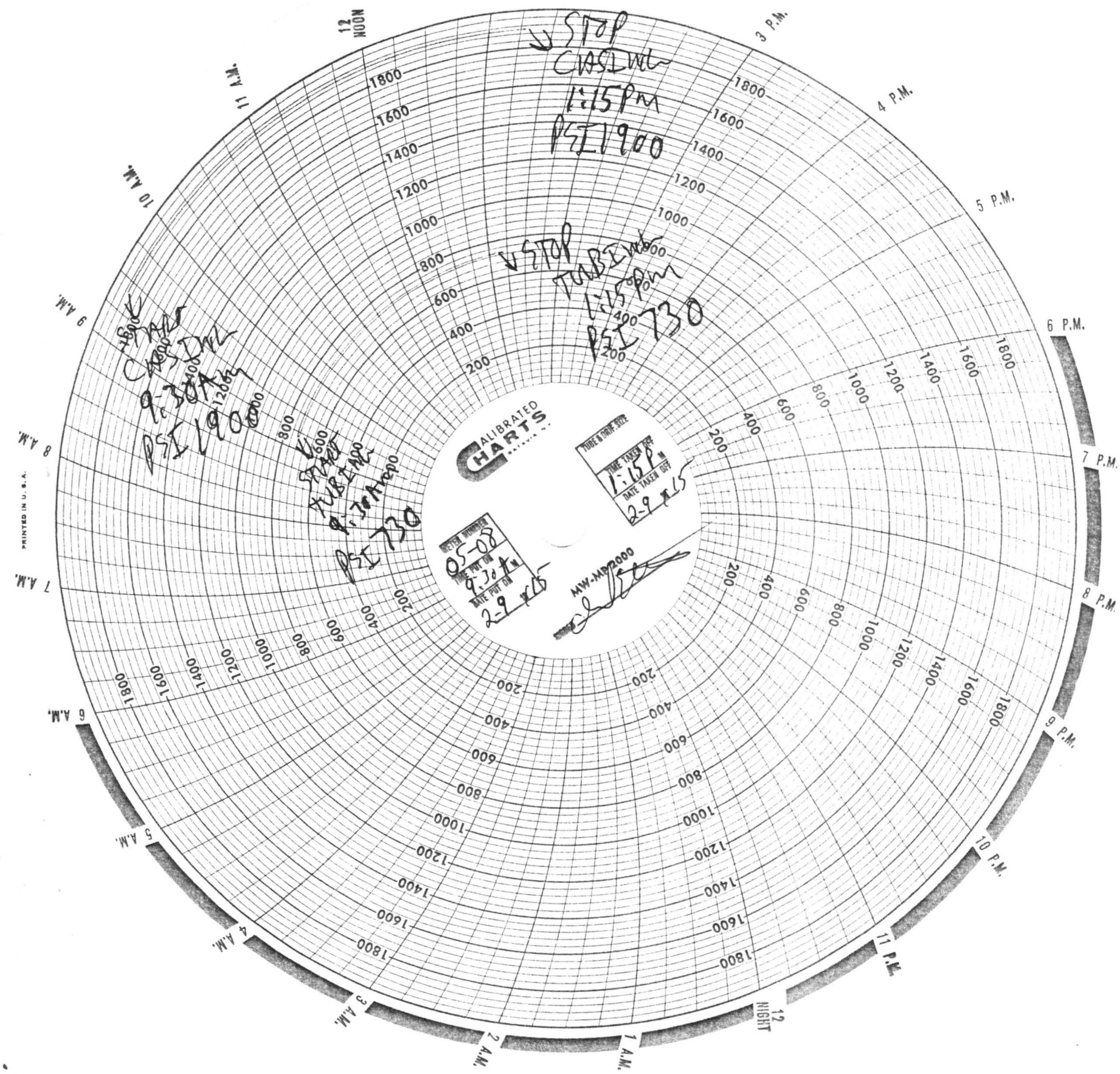
Regularly scheduled test? [ ] Yes [ ] No
Initial test for permit? [ ] Yes [ ] No
Test after well rework? [X] Yes [ ] No

Well injecting during test? If Yes, rate: _____ **bpd**

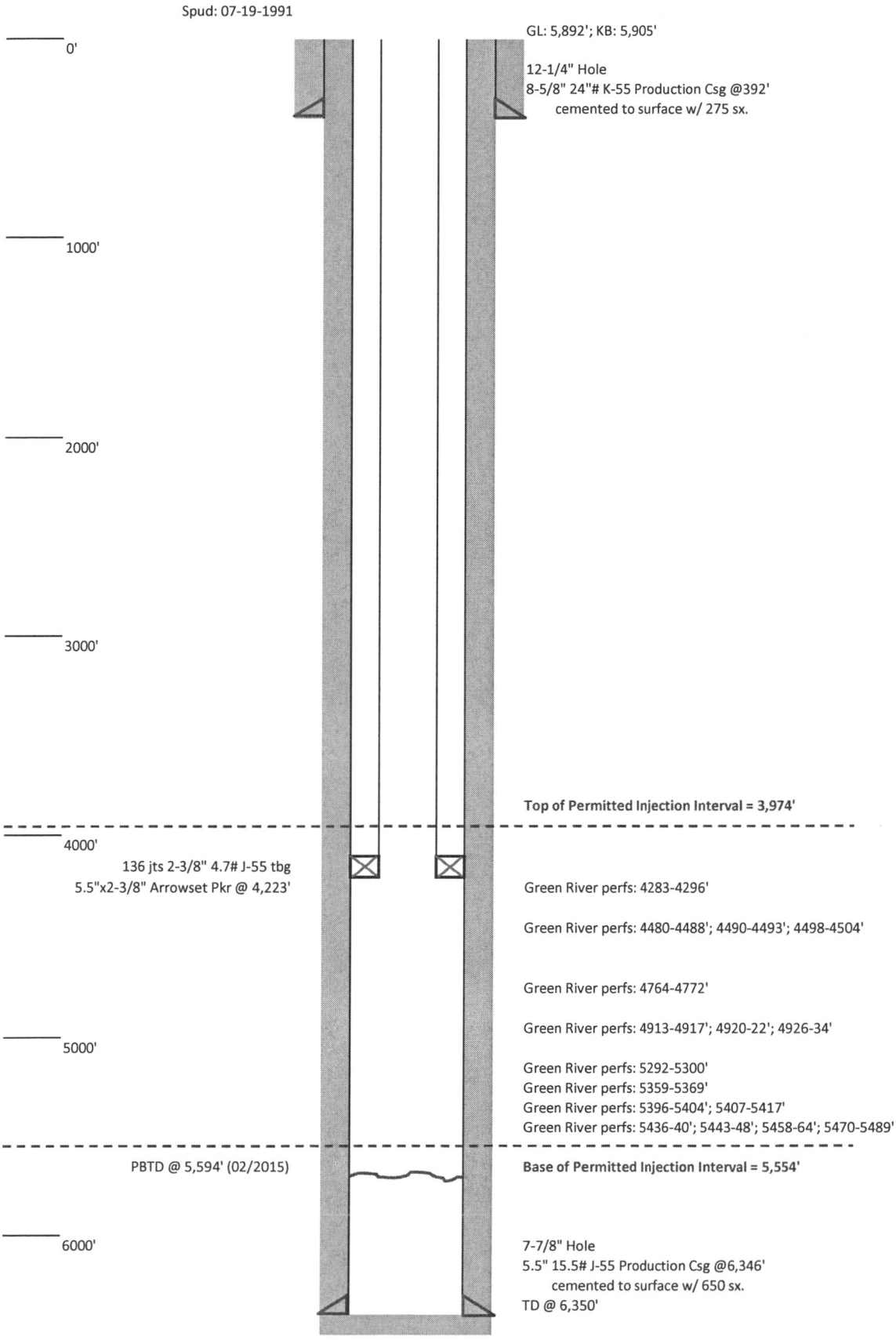
Pre-test annulus pressure: _____ **psig**

MIT DATA TABLE	Test #1	Test #2	Test #3
TUBING		**PRESSURE RECORD**	
Initial Pressure	730 psig	psig	psig
End of test pressure	730 psig	psig	psig
CASING / TUBING ANNULUS		**PRESSURE RECORD**	
0 minutes	1900 psig	psig	psig
5 minutes	1900 psig	psig	psig
10 minutes	1900 psig	psig	psig
15 minutes	1900 psig	psig	psig
20 minutes	1900 psig	psig	psig
25 minutes	1900 psig	psig	psig
30 minutes	1900 psig	psig	psig
3 1/2 Hours ~~minutes~~	1901 psig	psig	psig
_____ minutes	psig	psig	psig
RESULT	[ ] Pass [ ] Fail	[ ] Pass [ ] Fail	[ ] Pass [ ] Fail

Does the annulus pressure build back up after the test ? If Yes, _____ psig.


STOP CASING 1:15PM PSI 1900
STOP TUBING 1:15pm PSI 730
START CASING 9:30A PSI 1900
START TUBING 9:30A PSI 730
CALIBRATED CHARTS
METER NUMBER 05-08
TIME PUT ON 9:30 A M
DATE PUT ON 2-9 15
TUBE & ORIF. SIZE
TIME TAKEN OFF 1:15 P M
DATE TAKEN OFF 2-9 15
MW-MP2000
PRINTED IN U.S.A.

Petroglyph Operating Company, Inc.
Ute Tribal 05-08 Injector
UIC Permit # UT2736-04324
WBD Updated: 02/10/2015



October 21, 2013

Don Breffle
Mail Code: 8ENF-UFO
US EPA Region 8
1595 Wyncoop Street
Denver, CO 80202-1129

RE: Underground Injection Control (UIC)
Notice of Violation
Loss of Mechanical Integrity
EPA Permit #UT2736-04324
Well No. Ute Tribal 05-08
Antelope Creek Oil Field
Duchesne County, Utah

Dear Mr. Breffle:

Please be advised that on October 19, 2014 we lost Mechanical Integrity on the Ute Tribal 05-08 Injection Well. My direct number is 435-722-5302 if you wish to contact us.

Sincerely,
Petroglyph Operating Company, Inc.

Rodrigo Jurado
Regulatory Compliance Specialist

U2 Entered
Date 10/29/14
Initial JB

TAB	GREEN	BLUE	CBI
		2	

October 21, 2014

Don Breffle
Mail Code: 8ENF-UFO
US EPA Region 8
1595 Wyncoop Street
Denver, CO 80202-1129

RE: EPA AREA PERMIT NO. UT2736-04328
Mechanical Integrity Test
Standard Five year retesting for Ute Tribal 04-05

Mr. Breffle:
The enclose Mechanical Integrity Test was performed on the above referenced well on October 10, 2014. This MIT was performed because the well was due for the regular five year Mechanical Integrity Test.

If you need any more information please call at (435) 722-5302.

Sincerely,
Petroglyph Operating Co., Inc.

Rodrigo Jurado
Regulatory Compliance Specialist

Encl: MIT for the Ute Tribal 04-05

U2 Entered
Date 10/29/14
Initial DB

TAB	GREEN	BLUE	CBI
		2	

Mechanical Integrity Test
Tubing/Casing Annulus Pressure Test

U.S. Environmental Protection Agency
Underground Injection Control Program
1595 Wynkoop Street, Denver, CO 80202

EPA Witness: _____ Date: 10/10/14

Test conducted by: CHAD STEVENSON

Others present: _____

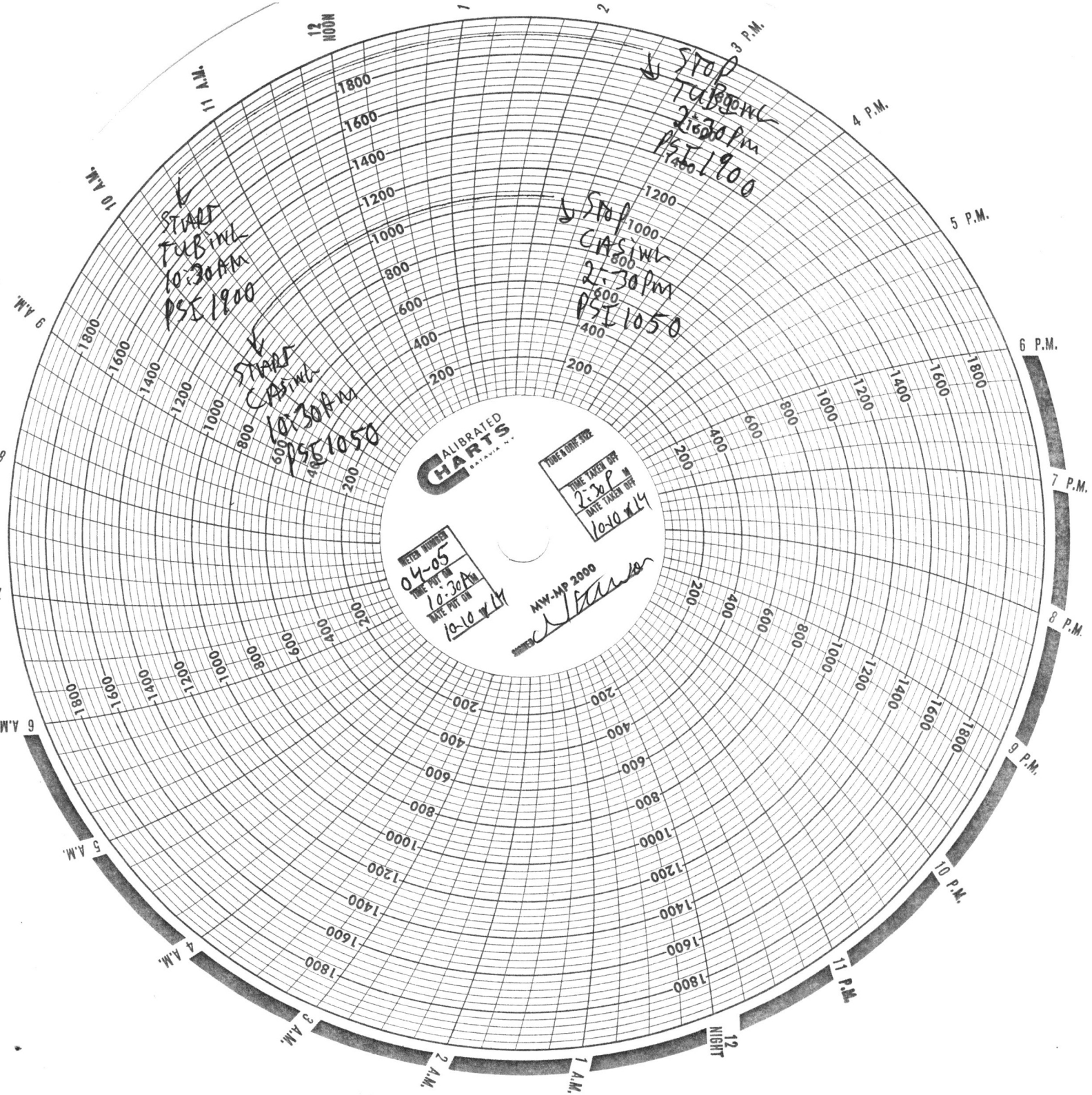
Well Name: 04-05 Type: ER SWD **Status: AC TA UC**
Field: ANTELOPE CREEK
Location: 04-05 Sec: ____ T ____ N / S R ____ E / W County: DUCHESNE State: UT
Operator: PETROGLYPH ENERGY
Last MIT: ____ / ____ / ____ **Maximum Allowable Pressure:** _____ **PSIG**

Regularly scheduled test? [X] Yes [ ] No
Initial test for permit? [ ] Yes [ ] No
Test after well rework? [ ] Yes [ ] No

Well injecting during test? If Yes, rate: 136 **bpd**
Pre-test annulus pressure: _____ **psig**

MIT DATA TABLE	Test #1	Test #2	Test #3
TUBING		**PRESSURE RECORD**	
Initial Pressure	1900 psig	psig	psig
End of test pressure	1900 psig	psig	psig
CASING / TUBING ANNULUS		**PRESSURE RECORD**	
0 minutes	1050 psig	psig	psig
5 minutes	1050 psig	psig	psig
10 minutes	1050 psig	psig	psig
15 minutes	1050 psig	psig	psig
20 minutes	1050 psig	psig	psig
25 minutes	1050 psig	psig	psig
30 minutes	1050 psig	psig	psig
3 Hours ~~minutes~~	1050 psig	psig	psig
_____ minutes	psig	psig	psig
RESULT	[ ] Pass [ ] Fail	[ ] Pass [ ] Fail	[ ] Pass [ ] Fail

Does the annulus pressure build back up after the test ? **If Yes,** _____ **psig.**


CALIBRATED CHARTS BATAVIA, N.Y.
PRINTED IN U.S.A.
METER NUMBER 04-05
TIME PUT ON 10:30 AM
DATE PUT ON 10-10 X 14
TUBE & ORIF. SIZE
TIME TAKEN OFF 2:30 PM
DATE TAKEN OFF 10-10 X 14
MW-MP 2000
Stop TUBing 2:30 PM PSI 1900
Stop CASing 2:30 PM PSI 1050
Starts TUBing 10:30 AM PSI 1900
Starts CASing 10:30 AM PSI 1050

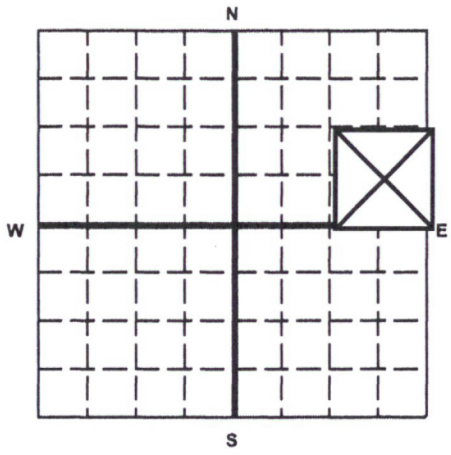
OMB No. 2040-0042 Approval Expires 12/31/2011

United States Environmental Protection Agency
Washington, DC 20460

ANNUAL DISPOSAL/INJECTION WELL MONITORING REPORT

Name and Address of Existing Permittee	Name and Address of Surface Owner
Petroglyph Operating Company, Inc. 2258 P.O. Box 7608 Boise, Idaho 83709	Ute Indian Tribe P.O. Box 70 Ft. Duchesne, Utah 84026

Locate Well and Outline Unit on Section Plat - 640 Acres



State	County	Permit Number
Utah	Duchesne	UT2736-04324

Surface Location Description

[ ] 1/4 of [ ] 1/4 of [SE] 1/4 of [NE] 1/4 of Section [5] Township [5S] Range [3W]

Locate well in two directions from nearest lines of quarter section and drilling unit

Surface Location [2500] ft. frm (N/S) [N] Line of quarter section and [550] ft. from (E/W) [E] Line of quarter section.

WELL ACTIVITY	TYPE OF PERMIT
[ ] Brine Disposal	[ ] Individual
[X] Enhanced Recovery	[X] Area
[ ] Hydrocarbon Storage	Number of Wells [111]

Lease Name [Ute Indian Tribe] Well Number [UTE TRIBAL 05-08]

		INJECTION PRESSURE		TOTAL VOLUME INJECTED		TUBING -- CASING ANNULUS PRESSURE (OPTIONAL MONITORING)	
MONTH	YEAR	AVERAGE PSIG	MAXIMUM PSIG	BBL	MCF	MINIMUM PSIG	MAXIMUM PSIG
January	13	1984	2019	52		0	0
February	13	1683	2025	110		0	0
March	13	1976	2023	34		0	0
April	13	1718	2026	44		0	0
May	13	1927	2021	53		0	0
June	13	1938	2023	20		0	0
July	13	1713	2002	109		0	0
August	13	1735	2002	57		0	0
September	13	1985	2013	74		0	0
October	13	1999	2014	42		0	0
November	13	1928	2011	30		0	0
December	13	1957	2010	13		0	0

Certification

I certify under the penalty of law that I have personally examined and am familiar with the information submitted in this document and all attachments and that, based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the information is true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment. (Ref. 40 CFR 144.32)

Name and Official Title *(Please type or print)*	Signature	Date Signed
Chad Stevenson, Water Facilities Supervisor		2/11/2014

EPA Form 7520-11 (Rev. 12-08)

TAB	GREEN	BLUE	CBI
		2	

U2 Entered
Date 3/18/14
Initial DB

Multi-Chem Analytical Laboratory
1553 East Highway 40
Vernal, UT 84078

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Units of Measurement: **Standard**

Water Analysis Report

Production Company: **PETROGLYPH ENERGY INC**
Well Name: **UTE TRIBAL 05-08 INJ**
Sample Point: **Wellhead**
Sample Date: **1/8/2014**
Sample ID: **WA-262966**

Sales Rep: **James Patry**
Lab Tech: **Gary Winegar**

Scaling potential predicted using ScaleSoftPitzer from Brine Chemistry Consortium (Rice University)

Sample Specifics	
Test Date:	1/8/2014
System Temperature 1 (°F):	180
System Pressure 1 (psig):	1300
System Temperature 2 (°F):	60
System Pressure 2 (psig):	15
Calculated Density (g/ml):	1.003
pH:	8.40
Calculated TDS (mg/L):	8941.05
CO2 in Gas (%):	
Dissolved CO_2 (mg/L)):	0.00
H_2S in Gas (%):	
H2S in Water (mg/L):	0.00

Analysis @ Properties in Sample Specifics			
Cations	*mg/L*	*Anions*	*mg/L*
Sodium (Na):	3088.36	Chloride (Cl):	4000.00
Potassium (K):	42.00	Sulfate (SO_4):	146.00
Magnesium (Mg):	28.00	Bicarbonate (HCO_3):	1537.20
Calcium (Ca):	61.00	Carbonate (CO_3):	
Strontium (Sr):	4.60	Acetic Acid (CH_3COO)	
Barium (Ba):	4.50	Propionic Acid (C_2H_5COO)	
Iron (Fe):	3.10	Butanoic Acid (C_3H_7COO)	
Zinc (Zn):	0.30	Isobutyric Acid ($(CH_3)_2CHCOO$)	
Lead (Pb):	0.08	Fluoride (F):	
Ammonia NH_3:		Bromine (Br):	
Manganese (Mn):	0.23	Silica (SiO_2):	25.68

Notes:
B=4 Al=.02 Li=.93

(PTB = Pounds per Thousand Barrels)

		Calcium Carbonate		Barium Sulfate		Iron Sulfide		Iron Carbonate		Gypsum $CaSO_4 \cdot 2H_2O$		Celestite $SrSO_4$		Halite NaCl		Zinc Sulfide	
Temp (°F)	PSI	SI	PTB	SI	PTB	SI	PTB	SI	PTB	SI	PTB	SI	PTB	SI	PTB	SI	PTB
60.00	14.00	1.50	44.03	1.72	2.63	0.00	0.00	1.98	2.23	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
73.00	157.00	1.51	43.75	1.57	2.61	0.00	0.00	2.05	2.23	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
86.00	300.00	1.53	44.45	1.44	2.58	0.00	0.00	2.12	2.24	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
100.00	443.00	1.56	45.20	1.33	2.55	0.00	0.00	2.19	2.24	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
113.00	585.00	1.59	45.98	1.23	2.52	0.00	0.00	2.26	2.24	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
126.00	728.00	1.62	46.77	1.15	2.49	0.00	0.00	2.33	2.24	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
140.00	871.00	1.66	47.55	1.07	2.45	0.00	0.00	2.40	2.24	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
153.00	1014.00	1.71	48.29	1.01	2.41	0.00	0.00	2.46	2.25	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
166.00	1157.00	1.75	49.00	0.96	2.38	0.00	0.00	2.53	2.25	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
180.00	1300.00	1.80	49.65	0.92	2.35	0.00	0.00	2.59	2.25	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Multi-Chem Analytical Laboratory
1553 East Highway 40
Vernal, UT 84078

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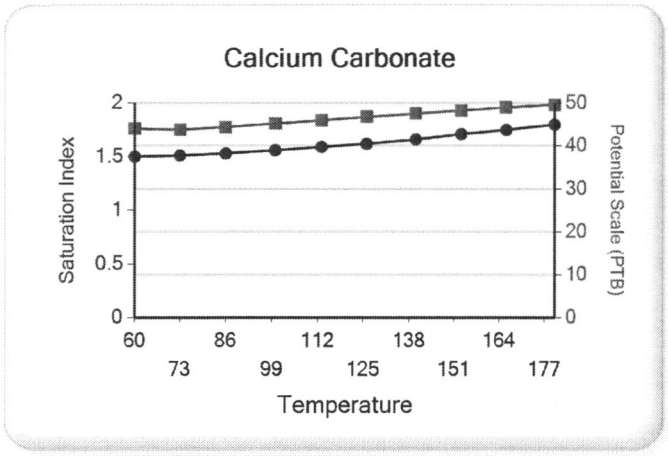
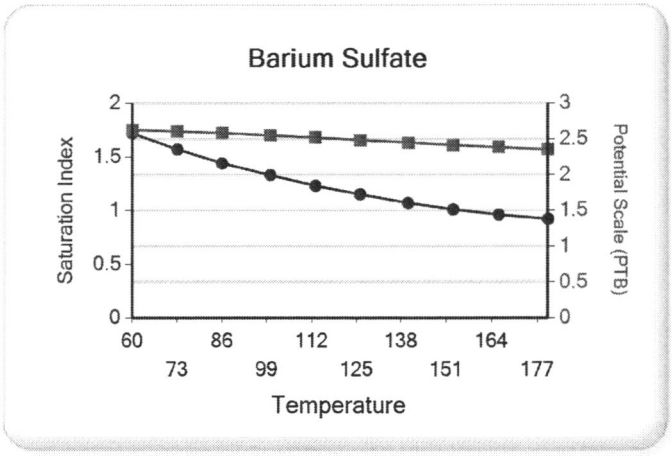
Water Analysis Report

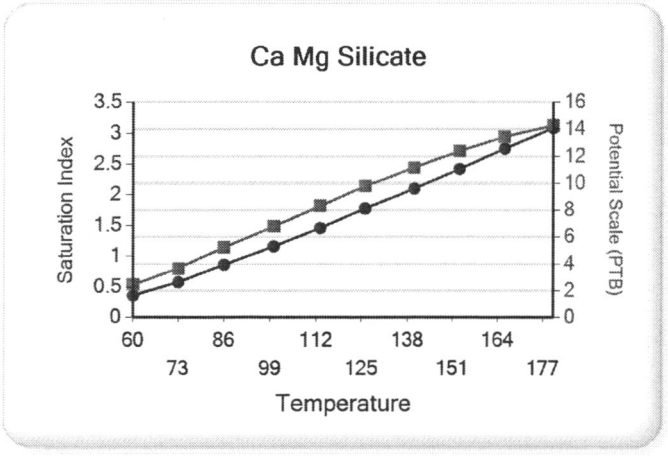
		Hemihydrate CaSO4~0.5H2O		Anhydrate CaSO4		Calcium Fluoride		Zinc Carbonate		Lead Sulfide		Mg Silicate		Ca Mg Silicate		Fe Silicate	
Temp (°F)	PSI	SI	PTB	SI	PTB	SI	PTB	SI	PTB	SI	PTB	SI	PTB	SI	PTB	SI	PTB
60.00	14.00	0.00	0.00	0.00	0.00	0.00	0.00	0.07	0.03	0.00	0.00	0.93	5.60	0.36	2.44	7.12	2.40
73.00	157.00	0.00	0.00	0.00	0.00	0.00	0.00	0.27	0.09	0.00	0.00	1.39	7.90	0.58	3.68	7.32	2.40
86.00	300.00	0.00	0.00	0.00	0.00	0.00	0.00	0.46	0.13	0.00	0.00	1.93	10.68	0.86	5.23	7.61	2.40
100.00	443.00	0.00	0.00	0.00	0.00	0.00	0.00	0.65	0.16	0.00	0.00	2.49	13.48	1.16	6.78	7.93	2.40
113.00	585.00	0.00	0.00	0.00	0.00	0.00	0.00	0.82	0.17	0.00	0.00	3.06	16.31	1.46	8.31	8.27	2.40
126.00	728.00	0.00	0.00	0.00	0.00	0.00	0.00	0.98	0.18	0.00	0.00	3.63	19.15	1.78	9.79	8.63	2.41
140.00	871.00	0.00	0.00	0.00	0.00	0.00	0.00	1.13	0.19	0.00	0.00	4.21	21.94	2.10	11.16	9.01	2.41
153.00	1014.00	0.00	0.00	0.00	0.00	0.00	0.00	1.27	0.19	0.00	0.00	4.80	24.56	2.42	12.40	9.39	2.41
166.00	1157.00	0.00	0.00	0.00	0.00	0.00	0.00	1.41	0.19	0.00	0.00	5.38	26.84	2.75	13.45	9.78	2.41
180.00	1300.00	0.00	0.00	0.00	0.00	0.00	0.00	1.53	0.20	0.00	0.00	5.95	28.62	3.08	14.28	10.18	2.41

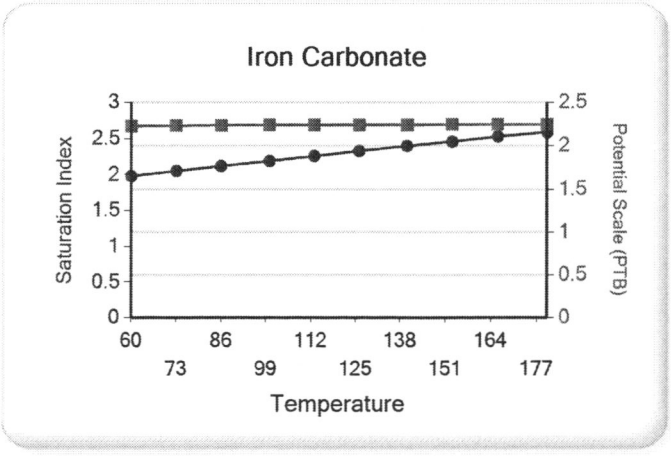
These scales have positive scaling potential under initial temperature and pressure: Calcium Carbonate Barium Sulfate Iron Carbonate Zinc Carbonate Mg Silicate Ca Mg Silicate Fe Silicate

These scales have positive scaling potential under final temperature and pressure: Calcium Carbonate Barium Sulfate Iron Carbonate Zinc Carbonate Mg Silicate Ca Mg Silicate Fe Silicate









Multi-Chem Analytical Laboratory
1553 East Highway 40
Vernal, UT 84078

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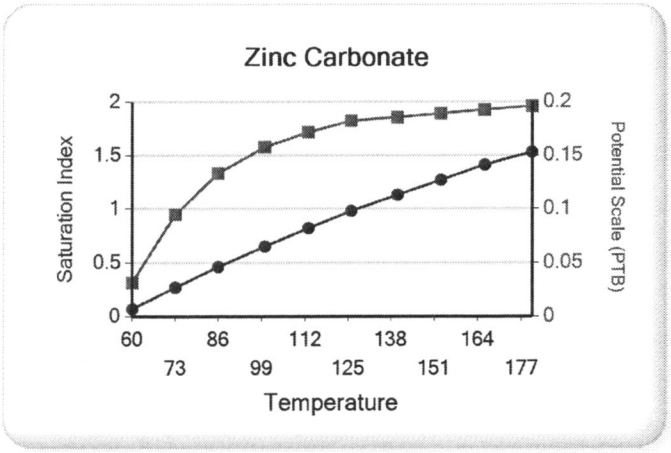
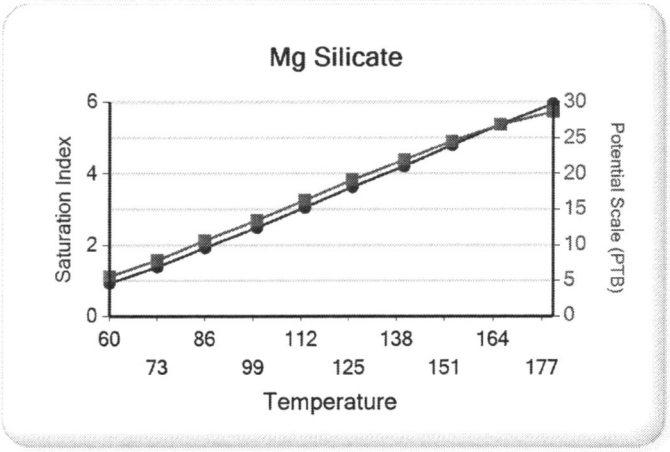
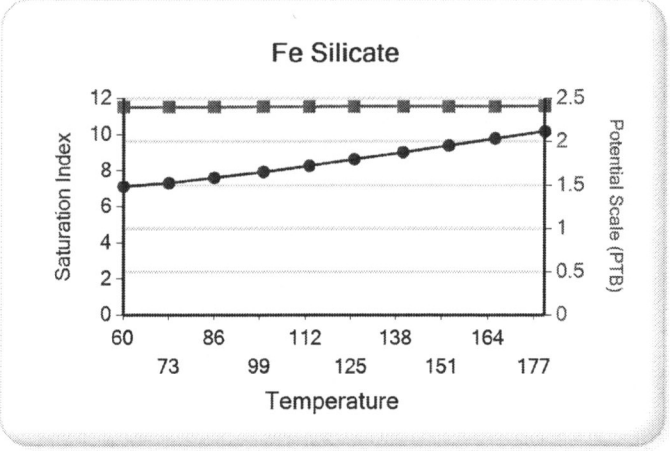
Water Analysis Report







UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 8
999 18TH STREET - SUITE 300
DENVER, CO 80202-2466

AUG 22 2001

Ref: 8P-W-GW

CERTIFIED MAIL
RETURN RECEIPT REQUESTED

Mr. Micheal Safford
Operations Coordinator
Petroglyph Operating Company, Inc.
P.O. Box 607
Roosevelt, UT 84066

RE: **UNDERGROUND INJECTION CONTROL (UIC)**
APPROVAL TO INCREASE MAXIMUM
SURFACE INJECTION PRESSURE
EPA Area Permit No. UT2736-00000
Ute Tribal No. 05-08
EPA Well Authority No. UT04324
Antelope Creek Waterflood
Duchesne County, Utah

Dear Mr. Safford:

The Environmental Protection Agency (EPA) Antelope Creek Final Area Permit UT2736-00000 (Effective July 12, 1994) Part II, Section C. 5. (b), permits the "Director" to authorize, by letter, an increase in the maximum surface injection pressure (MIP) for the Ute Tribal No. 05-08, following receipt and approval of a valid step-rate test (SRT).

On August 3, 2001, Petroglyph Energy, Inc. (Petroglyph) submitted an SRT to the EPA, dated July 26, 2001. The SRT was received by the EPA on August 10, 2001. The SRT was reviewed and approved by the EPA on August 13, 2001. The SRT shows the fracture gradient (FG) for the Green River Formation injection interval between the approximate depths of 4283' and 5488' to be 0.82 psi/ft.

As of the date of this letter, the EPA authorizes an increase in the maximum surface injection pressure (MSIP) from 1900 psig to 2055 psig. The following modified injection pressure will provide for higher injectivity capacity which will improve the waterflood efficiency without endangering any underground sources of drinking water (USDWs).

FG = 0.82 psi/ft
D = 5339 feet: top of perforations
SG = Specific gravity of injectate: 1.005
0.433 = Density of injectate fluid
MIP = [(0.82) - (.433)(1.005)] 5339

MSIP = 2055 psig

Please send all compliance correspondence relative to this well to the **ATTENTION: Nathan Wiser, at the letterhead address, citing Mail Code: 8ENF-T very prominently.** You may call Mr. Wiser at 303.312.6211.

All other provisions and conditions of the Permit remain as originally issued July 12, 1994 and Revised April 30, 1998.

Sincerely,

for Kerrigan G. Clough
Assistant Regional Administrator
Office of Partnerships and
Regulatory Assistance

cc: Mr. D. Floyd Wopsock, Chairman
Uintah & Ouray Business Committee
Ute Indian Tribe

Ms. Elaine Willie, Environmental Coordinator
Ute Indian Tribe

Norman Cambridge
BIA - Uintah & Ouray Agency

Mr. Jerry Kenczka
BLM - Vernal District Office

Mr. Gilbert Hunt
State of Utah Natural Resources
Division of Oil, Gas & Mining

Mr. Nathan Wiser
8ENF-T

Step Rate Test (SRT) Analysis

Date: 08/15/01

Operator: Petroglyph Energy, Inc.
Well: Ute Tribal 05-08
Permit #: UT2736-04324

Enter the following data :

Specific Gravity (SG) of injectate	1.005	g/cc
Depth to top perforation(D)	5339	feet
Depth to Top of permitted injection zone		feet
Estimated Formation Parting Pressure (Pfp) from SRT chart	2065	psi
Instantaneous Shut In Pressure (ISIP) from SRT	2135	psi
Bottom Hole Parting Pressure (from downhole pressure recorder)		psi

2065

Part One - Calculation of Fracture Gradient (F G)

Calculated Fracture Gradient = **0.820** psi/ft.

FG = Pbhp / Depth (D) of top perforation
(Uses downhole recorded bottom hole parting pressure when available)

0.822

Calculated Bottom Hole Parting Pressure = 4388 psi

*Calculated Pbhp = Formation Fracture Pressure + (0.433 * SG * D)*
(Use lesser of ISIP or Pfp) *value used=* 2065

4388

Part Two - Calculation of Maximum Surface Injection Pressure (M S I P)

Maximum Surface Injection Pressure = **2055** psig

(rounded down to nearest 5 psig)

*MSIP = [FG - (0.433 * SG)] * Depth to top of permitted injection zone (or top perforation)*

2055

5339

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 8
999 18TH STREET - SUITE 300
DENVER, CO 80202-2466

CONCURRENCE COPY

AUG 22 2001

Ref: 8P-W-GW

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P.O. Box 607
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EPA Area Permit No. UT2736-00000
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CEW 8/15/01

8P-W-GW Distribution 8/20/01

8P-W-GW 8/21/01 KG mailed 8/22/01 KG

8P-W 8/21/01

Printed on Recycled Paper

FG	=	0.82 psi/ft
D	=	5339 feet: top of perforations
SG	=	Specific gravity of injectate: 1.005
0.433	=	Density of injectate fluid
MIP	=	[(0.82) - (.433)(1.005)] 5339

MSIP = 2055 psig

Please send all compliance correspondence relative to this well to the **ATTENTION: Nathan Wiser, at the letterhead address, citing Mail Code: 8ENF-T very prominently.** You may call Mr. Wiser at 303.312.6211.

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Sincerely,

Kerrigan G. Clough
Assistant Regional Administrator
Office of Partnerships and
Regulatory Assistance

cc: Mr. D. Floyd Wopsock, Chairman
Uintah & Ouray Business Committee
Ute Indian Tribe

Ms. Elaine Willie, Environmental Coordinator
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Norman Cambridge
BIA - Uintah & Ouray Agency

Mr. Jerry Kenczka
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Mr. Gilbert Hunt
State of Utah Natural Resources
Division of Oil, Gas & Mining

Mr. Nathan Wiser
8ENF-T

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 8
999 18TH STREET - SUITE 300
DENVER, CO 80202-2466

AUG 22 2001

Ref: 8P-W-GW

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Dear Mr. Safford:

The Environmental Protection Agency (EPA) Antelope Creek Final Area Permit UT2736-00000 (Effective July 12, 1994) Part II, Section C. 5. (b), permits the "Director" to authorize, by letter, an increase in the maximum surface injection pressure (MIP) for the Ute Tribal No. 05-08, following receipt and approval of a valid step-rate test (SRT).

On August 3, 2001, Petroglyph Energy, Inc. (Petroglyph) submitted an SRT to the EPA, dated July 26, 2001. The SRT was received by the EPA on August 10, 2001. The SRT was reviewed and approved by the EPA on August 13, 2001. The SRT shows the fracture gradient (FG) for the Green River Formation injection interval between the approximate depths of 4283' and 5488' to be 0.82 psi/ft.

As of the date of this letter, the EPA authorizes an increase in the maximum surface injection pressure (MSIP) from 1900 psig to 2055 psig. The following modified injection pressure will provide for higher injectivity capacity which will improve the waterflood efficiency without endangering any underground sources of drinking water (USDWs).

Scan under
UT 20763 - 04324
MAIP Change
Request

SENDER: COMPLETE THIS SECTION

- Complete items 1, 2, and 3. Also complete item 4 if Restricted Delivery is desired.
- Print your name and address on the reverse so that we can return the card to you.
- Attach this card to the back of the mailpiece, or on the front if space permits.

1. Article Addressed to: 8/22/01 CW 4146C+ 4147C

Mr. Micheal Safford
Operations Coordinator
Petroglyph Operating Co., Inc.
P.O. Box 607
Roosevelt, UT 84066

AUG 22 2001

COMPLETE THIS SECTION ON DELIVERY

A. Received by *(Please Print Clearly)* B. Date of Delivery 8-27-01

C. Signature X [signature] ☐ Agent ☒ Addressee

D. Is delivery address different from item 1? ☐ Yes
If YES, enter delivery address below: ☐ No

AUG 30 2001

3. Service Type
XX Certified Mail ☐ Express Mail
☐ Registered ☐ Return Receipt for Merchandise
☐ Insured Mail ☐ C.O.D.

4. Restricted Delivery? *(Extra Fee)* ☐ Yes

2. Article Number *(Copy from service label)* 7001 0320 0005 9387 1765

PS Form 3811, July 1999 A Domestic Return Receipt 102595-00-M-0952

8/22/01 To Micheal Safford Petroglyph Operating Company, Inc. mailed together:
Original green card (#4146C)
1. UTE TRIBAL NO. 05-16 (UT2736-04327)
2. UTE TRIBAL NO. 05-08 (UT2736-04324) (#4147C)

U.S. Postal Service
CERTIFIED MAIL RECEIPT
(Domestic Mail Only; No Insurance Coverage Provided)

Postage	$
Certified Fee	
Return Receipt Fee (Endorsement Required)	
Restricted Delivery Fee (Endorsement Required)	
Total Postage & Fees	$

Postmark Here

AUG 22 2001

Sent To Mr. Micheal Safford
Street, Apt. No., or PO Box No. Operations Coordinator
City, State, ZIP+4 Petroglyph Operating Co., Inc.
P.O. BOX 607
Roosevelt, UT 84066

PS Form 3800, January 2001 See Reverse for Instructions

7001 0320 0005 9387 1765

FG = 0.82 psi/ft
D = 5339 feet: top of perforations
SG = Specific gravity of injectate: 1.005
0.433 = Density of injectate fluid
MIP = [(0.82) - (.433)(1.005)] 5339

MSIP = 2055 psig

Please send all compliance correspondence relative to this well to the **ATTENTION: Nathan Wiser, at the letterhead address, citing Mail Code: 8ENF-T very prominently.** You may call Mr. Wiser at 303.312.6211.

All other provisions and conditions of the Permit remain as originally issued July 12, 1994 and Revised April 30, 1998.

Sincerely,

for Kerrigan G. Clough
Assistant Regional Administrator
Office of Partnerships and
Regulatory Assistance

cc: Mr. D. Floyd Wopsock, Chairman
Uintah & Ouray Business Committee
Ute Indian Tribe

Ms. Elaine Willie, Environmental Coordinator
Ute Indian Tribe

Norman Cambridge
BIA - Uintah & Ouray Agency

Mr. Jerry Kenczka
BLM - Vernal District Office

Mr. Gilbert Hunt
State of Utah Natural Resources
Division of Oil, Gas & Mining

Mr. Nathan Wiser
8ENF-T

Step Rate Test (SRT) Analysis

Date: 08/15/01

Operator: Petroglyph Energy, Inc.
Well: Ute Tribal 05-08
Permit #: UT2736-04324

Enter the following data :

Specific Gravity (SG) of injectate	1.005	g/cc
Depth to top perforation(D)	5339	feet
Depth to Top of permitted injection zone		feet
Estimated Formation Parting Pressure (Pfp) from SRT chart	2065	psi
Instantaneous Shut In Pressure (ISIP) from SRT	2135	psi
Bottom Hole Parting Pressure (from downhole pressure recorder)		psi

2065

Part One - Calculation of Fracture Gradient (F G)

Calculated Fracture Gradient = **0.820** psi/ft.

FG = Pbhp / Depth (D) of top perforation
(Uses downhole recorded bottom hole parting pressure when available)

0.822

Calculated Bottom Hole Parting Pressure = 4388 psi

*Calculated Pbhp = Formation Fracture Pressure + (0.433 * SG * D)*
(Use lesser of ISIP or Pfp) *value used=* 2065

4388

Part Two - Calculation of Maximum Surface Injection Pressure (M S I P)

Maximum Surface Injection Pressure = **2055** psig
(rounded down to nearest 5 psig)

*MSIP = [FG - (0.433 * SG)] * Depth to top of permitted injection zone (or top perforation)*

2055

5339

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION VIII
999 18th STREET - SUITE 500
DENVER, COLORADO 80202-2466

Ref: 8P2-W-GW

AUG - 8 1996

CERTIFIED MAIL
RETURN RECEIPT REQUESTED

Ms. Angela R. Ely
Administrative Operations Manager
Petroglyph Operating Company, Inc.
P. O. Box 1839
Hutchinson, KS 67504-1839

RE: UNDERGROUND INJECTION CONTROL (UIC)
Authorization to Inject Gas
Ute Tribal #05-08
Antelope Creek Waterflood
EPA Area Permit No. UT2736-04324
Duchesne County, Utah

Dear Ms. Ely:

Thank you for the recently submitted information pertaining to the above-referenced permitted well requesting that natural gas be injected into the Ute Tribal #05-08 for ninety (90) days at which time the well will be converted to water injection. Injection of gas into the Ute Tribal #05-08 well will allow a pilot to be performed which may have very significant impact on recovery of original-oil-in-place (OOIP).

Pleased be advised that administrative approval has been granted for gas and then water injection into the above referenced well. Please also be aware of permit conditions Part II, Section C. 2., Prior to Commencing Injection (additional wells). You are reminded that, in accordance with the conditions of the permit, and as modified by UIC Permit Minor Modification dated June 19, 1996, the current maximum surface injection pressure (Pmax) is limited to 1915 psig.

Please direct all correspondence to the attention of Chuck Williams at the above letterhead **(MAIL CODE 8P2-W-GW)** or contact Mr. Williams at (303) 312-6625. Thank you for your continued cooperation.

Sincerely,

D. Edwin Hogle
Acting Director, Groundwater Program
Office of Pollution Prevention,
State and Tribal Assistance

cc: Mr. Ferron Secakuku
Energy and Minerals Resource Dep't
Ute Indian Tribe

Ms. Ruby Etwine, Chairperson
Uintah & Ouray Business Committee
Northern Ute Tribe

Mr. Norman Cambridge
Uintah & Ouray Agency - BIA

Mr. Jerry Kenczka
Vernal District Office - BLM

Mr. Gil Hunt
State of Utah Natural Resources
Division of Oil, Gas & Mining

Is your RETURN ADDRESS completed on the reverse side?

SENDER: cew 08/08/96 2902C

- Complete items 1 and/or 2 for additional services.
- Complete items 3, 4a, and 4b.
- Print your name and address on the reverse of this form so that we can return this card to you.
- Attach this form to the front of the mailpiece, or on the back if space does not permit.
- Write *"Return Receipt Requested"* on the mailpiece below the article number.
- The Return Receipt will show to whom the article was delivered and the date delivered.

I also wish to receive the following services (for an extra fee):

1. ☐ Addressee's Address
2. ☐ Restricted Delivery

Consult postmaster for fee.

3. Article Addressed to: UT2736-04324

Ms. Angela R. Ely
Administrative Operations Manager
Petroglyph Operating Company, Inc.
P. O. BOX 1839
Hutchinson, KS 67504-1839

4a. Article Number
P 380 388 233

4b. Service Type
☐ Registered xx☑ Certified
☐ Express Mail ☐ Insured
☐ Return Receipt for Merchandise ☐ COD

7. Date of Delivery AUG 13 1996

5. Received By: *(Print Name)* Theresa Sotomayor

8. Addressee's Address *(Only if requested and fee is paid)*

6. Signature: *(Addressee or Agent)*
X

cjo

PS Form **3811**, December 1994 H Domestic Return Receipt

Thank you for using Return Receipt Service.

Scan under
UT 20 736 - 04324
Authorization to
Inject - Initial

P 380 388 233

US Postal Service
Receipt for Certified Mail
No Insurance Coverage Provided. cew 2902C
Do not use for International Mail *(See reverse)*

Sent to Ms. Angela R. Ely
Street & Number Administrative Operations Mgr.
Petroglyph Operating Co. Inc.
Post Office, State & ZIP Code P. O. BOX 1839
Hutchinson, KS 67504-1839

Postage	$
Certified Fee	AUG - 8 1996
Special Delivery Fee	
Restricted Delivery Fee	
Return Receipt Showing to Whom & Date Delivered	
Return Receipt Showing to Whom, Date, & Addressee's Address	
TOTAL Postage & Fees	$

Postmark or Date

PS Form **3800**, April 1995

Authorization to Inject Gas
Ute Tribal #05-08
Antelope Creek Waterflood
EPA Area Permit #UT2736-04324
Duchesne County, Utah

CONCURRENCE COPY

AUG - 8 1996

Ref: 8P2-W-GW

CERTIFIED MAIL
RETURN RECEIPT REQUESTED

Ms. Angela R. Ely
Administrative Operations Manager
Petroglyph Operating Company, Inc.
P. O. Box 1839
Hutchinson, KS 67504-1839

RE: UNDERGROUND INJECTION CONTROL (UIC)
Authorization to Inject Gas
Ute Tribal #05-08
Antelope Creek Waterflood
EPA Area Permit No. UT2736-04324
Duchesne County, Utah

Dear Ms. Ely:

Thank you for the recently submitted information pertaining to the above-referenced permitted well requesting that natural gas be injected into the Ute Tribal #05-08 for ninety (90) days at which time the well will be converted to water injection. Injection of gas into the Ute Tribal #05-08 well will allow a pilot to be performed which may have very significant impact on recovery of original-oil-in-place (OOIP).

Pleased be advised that administrative approval has been granted for gas and then water injection into the above referenced well. Please also be aware of permit conditions Part II, Section C. 2., Prior to Commencing Injection (additional wells). You are reminded that, in accordance with the conditions of the permit, and as modified by UIC Permit Minor Modification dated June 19, 1996, the current maximum surface injection pressure (Pmax) is limited to 1915 psig.

Please direct all correspondence to the attention of Chuck Williams at the above letterhead **(MAIL CODE 8P2-W-GW)** or contact Mr. Williams at (303) 312-6625. Thank you for your continued cooperation.

Sincerely,

D. Edwin Hogle
Acting Director, Groundwater Program
Office of Pollution Prevention,
State and Tribal Assistance

CEW 8P2-W-GW 8/6/96

8P2-W-GW 8/6/96

8/8/96

cc

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION VIII
999 18th STREET - SUITE 500
DENVER, COLORADO 80202-2466

Ref: 8P2-W-GW

AUG 29 1996

CERTIFIED MAIL
RETURN RECEIPT REQUESTED

Ms. Angela R. Ely
Administrative Operations Manager
Petroglyph Operating Company, Inc.
P. O. Box 1839
Hutchinson, KS 67504-1839

RE: UNDERGROUND INJECTION CONTROL (UIC)
Authorization to Inject
Ute Tribal #05-08 (UT04324)
Antelope Creek Waterflood
EPA Area Permit No. UT2736-00000
Duchesne County, Utah

Dear Ms. Ely:

Thank you for the recently submitted information pertaining to the above-referenced area permit. The Well Rework Record, injection zone fluid pore pressure survey, and the successfully run mechanical integrity test on the Ute Tribal #05-08 (UT2736-04324) have been reviewed and approved. Petroglyph has complied with all of the pertinent permit conditions (Part II, Section C. 2.) for the Antelope Creek Waterflood area permit.

Please be advised that administrative approval has been granted for water injection into the above referenced well. Please also be aware of the monitoring, recordkeeping and reporting requirements described in Part II, Section D of the permit and that the current maximum surface injection pressure (Pmax) is limited to 1915 psig, as modified by UIC Permit Minor Modification dated June 19, 1996.

Upon receipt of this letter, the Compliance Officer, Mr. John Carson, will then take over routine matters involving well operations, future correspondence, forms, and reports. Please direct all correspondence to the attention of Mr. Carson at the above letterhead **(MAIL CODE ENF-T)** or contact Mr. Carson at (303) 312-6203. Thank you for your continued cooperation.

Sincerely,

D. Edwin Hogle
Acting Director, Groundwater Program
Office of Pollution Prevention
State and Tribal Assistance

Lease under
UT 20736 - 04324
Authorization B
Inject - Final

P 380 388 245

US Postal Service
Receipt for Certified Mail
No Insurance Coverage Provided cew 2918C
Do not use for International Mail *(See reverse)*

Sent to Ms. Angela R.Ely
Administrative Oeprations Mgr.
Street & Number Petroglyph Oeprating Co. Inc.
Post Office, State, & ZIP Code P.O. BOX 1839
Hutchinson, KS 67504-1839

Postage	$
Certified Fee	
Special Delivery Fee	
Restricted Delivery Fee	
Return Receipt Showing to Whom & Date Delivered	
Return Receipt Showing to Whom, Date, & Addressee's Address	
TOTAL Postage & Fees	$

Postmark or Date
Authorization to Inject Ute Tribal #5-08 (UT04324)
Antelope Creek Waterflood
EPA Area Permit #UT2736-00000
Duchesne County, Utah

PS Form 3800, April 1995

Is your RETURN ADDRESS completed on the reverse side?

SENDER: cew 08/29/96 2918C

- Complete items 1 and/or 2 for additional services.
- Complete items 3, 4a, and 4b.
- Print your name and address on the reverse of this form so that we can return this card to you.
- Attach this form to the front of the mailpiece, or on the back if space does not permit.
- Write *"Return Receipt Requested"* on the mailpiece below the article number.
- The Return Receipt will show to whom the article was delivered and the date delivered.

I also wish to receive the following services (for an extra fee):
1. ☐ Addressee's Address
2. ☐ Restricted Delivery

Consult postmaster for fee.

3. Article Addressed to: UT2736-00000

Ms. Angela R.Ely
Administrative Oeprations Manager
Petroglyph Oeprating Company, Inc
P. O. BOX 1839
Hutchinson, KS 67504-1839

4a. Article Number
P 380 388 245

4b. Service Type
☐ Registered ☒ Certified
☒ Express Mail ☐ Insured
☐ Return Receipt for Merchandise ☐ COD

7. Date of Delivery SEP - 4 1996

5. Received By: *(Print Name)* T Sotomayor

6. Signature: *(Addressee or Agent)* X Teresa Solazek

8. Addressee's Address *(Only if requested and fee is paid)*

cjo

PS Form 3811, December 1994 Domestic Return Receipt

Thank you for using Return Receipt Service.

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION VIII
999 18th STREET - SUITE 500
DENVER, COLORADO 80202-2466

JUN 19 1996

Ref: 8P2-W-GW

CERTIFIED MAIL
RETURN RECEIPT REQUESTED

Ms. Angela R. Ely
Administrative Operations Manager
Petroglyph Operating Company, Inc.
6209 North Highway 61
Hutchinson, Kansas 67502

RE: **UIC Permit Minor Modification**
Conversion of Additional Wells (5)
Antelope Creek Waterflood
EPA Area Permit UT2736-00000
Duchesne County, Utah

Dear Ms. Ely:

Your letter of April 3, 1996, requesting that the following five (5) wells be converted to Class II enhanced oil recovery wells and added to the Antelope Creek Waterflood, as authorized under EPA Area Permit UT2736-00000, is hereby granted.

NAME	LOCATION	EPA PERMIT NO.
Ute Tribal 04-01	NE NE Section 4	UT2736-04322
Ute Tribal 05-08	SE NE Section 5	UT2736-04324
Ute Tribal 29-08A	SE NE Section 29	UT2736-04325
Ute Tribal 05-16	SE SE Section 5	UT2736-04327
Ute Tribal 04-05	SW NW Section 4	UT2736-04328

These additional wells are within the boundary of the existing area permit for the Antelope Creek Waterflood (UT2736-00000), and this addition is made by minor permit modification according to the terms and conditions of that permit. Unless specifically mentioned in the Minor Permit Modification, all terms and conditions of the original permit will apply to the construction, operation, monitoring, and plugging and abandonment of these additional injection wells. The proposed well location, well schematic, conversion procedures, and revised plugging and abandonment plans and schematics submitted by your office have been reviewed and approved as follows:

(1) The **construction** of these wells have been reviewed and found satisfactory as submitted, therefore, no corrective action is required.

(2) **Maximum injection pressure (Pmax)** for these wells are a follows:

Pmax = [Fg - 0.433 (Sg)] d

Where: Pmax = Maximum surface injection pressure at wellhead
d = 4283' shallowest perforations of the five (5) wells
Sg = Specific gravity of injected water

Pmax = [0.88 - .433 (1.00)] 4283

Pmax = 1915 psig

Until such time as the permittee demonstrates that a fracture pressure other than 1915 psig applies to the disposal zones, of the newly converted wells, the maximum allowable wellhead injection pressure **(Pmax) for the these wells will be 1915 psig.**

(3) The **plugging and abandonment plans and schematics**, submitted by your office, have been reviewed and approved subject to the following changes:

(a) Prior to, or in conjunction with the emplacement of the surface plug (plug #3 in the primary plan of the permit) in the production casing, the production casing is to perforated 2', w/4 spf, at a point 50' below the surface casing shoe and cement squeeze the perfs to 50' above the shoe. Pull out of hole (POOH) leaving a 100' cement plug inside the production casing.

(b) The production/surface casing annulus will also be cemented from surface to a depth of 50'. A similar plug (50' to surface) will be left inside of the production casing (plug #4 in the primary plan of the permit).

Prior to commencing injection into the above five (5) wells, permittee must fulfill permit condition Part II, C. 2. and have received **written authorization** to inject by the EPA Director. In summary, these requirements for your newly permitted injection wells are:

(1) All conversion is complete and the permittee has submitted a completed **Well Rework Record (EPA Form 7520-12)**.

(2) The **pore pressure has been determined.**

(3) The well has successfully completed and passed a **mechanical integrity test (MIT)**, guidance enclosed.

All other provisions and conditions of the permit remain as originally issued.

If you have any questions, please contact Mr. Chuck Williams at the above letterhead address, citing **MAIL CODE 8P2-W-GW** or telephone Mr. Williams at (303) 312-6625. Thank you for your continued cooperation.

Sincerely,

Kerrigan G. Clough
Assistant Regional Administrator
Office of Pollution Prevention,
State and Tribal Assistance

Enclosures: Schematics - Conversion
MIT Guidance and EPA Forms
Well Rework Record EPA Form 7520-12

cc w/Enclosures: Mr. Ferron Secakuku
Energy & Mineral Resource Dep't.
Ute Indian Tribe

Mr. Luke Duncan, Chairman
Uintah & Ouray Business Committee
Northern Ute Tribe

Mr. Norman Cambridge
Uintah & Ouray Agency
BIA

Mr. Gil Hunt
State of Utah Natural Resources
Division of Oil, Gas, and Mining

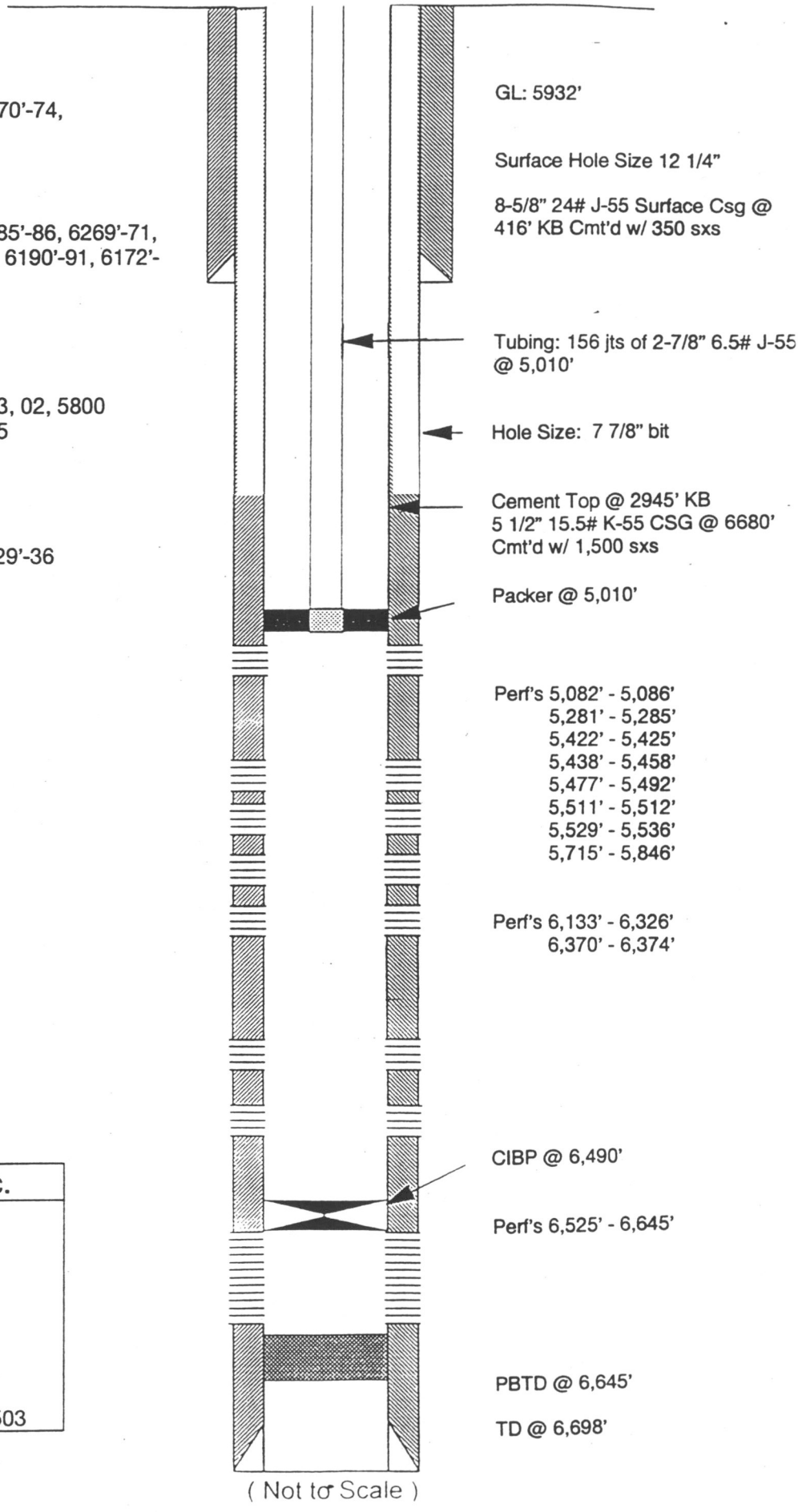
Mr. Jerry Kenczka
BLM - Vernal District Office

Ute Tribal #04-01
Wellbore Diagram
After Conversion

Well History:

5/30/83	Spud Well "Coors"
6/24/83	Perf'd 6645'-35, 6525'-30, 6370'-74, Brk Dwn 2% KCl water Frac'd 76,500# sand ISIP 2,500 psi
6/30/83	Perf'd 6325'-26, 6311'-12, 6285'-86, 6269'-71, 6253'-54, 6248'-49, 6229'-31, 6190'-91, 6172'-74, 6160'-67, 6133'-40 Brk Dwn 7½% HCl Frac'd 90,000# sand ISIP 2,500 psi
9/8/83	Perf'd 5846, 43, 40, 36, 04, 03, 02, 5800 Perf'd 5743, 33, 29, 25, 21, 15 Brk Dwn 7½% Acid Frac'd 100,716# sand ISIP 2,700 psi
11/18/83	Perf'd 5477'-92, 5111'-15, 5529'-36 Frac'd 36,000# sand ISIP 2,000 psi
8/22/84	Perf'd 5082'-86, 5281'-85 Frac'd 100,000# sand
7/26/90	Pump Changes
2/7/92	Well Shut In
11/27/92	Acid job Put well back on production

Tubing Detail: 2' psp Packer, 156 jts



Petroglyph Operating Co., Inc.

Ute Tribal 04-01

(1331' FNL & 1277' FEL)

NE NE Section 24-T5S-R3W
Antelope Creek Field
Duchesne Co, Utah
API #43-013 30762: Lease #14-20-H62-3503

Ute Tribal #05-08
Wellbore Diagram
After Conversion

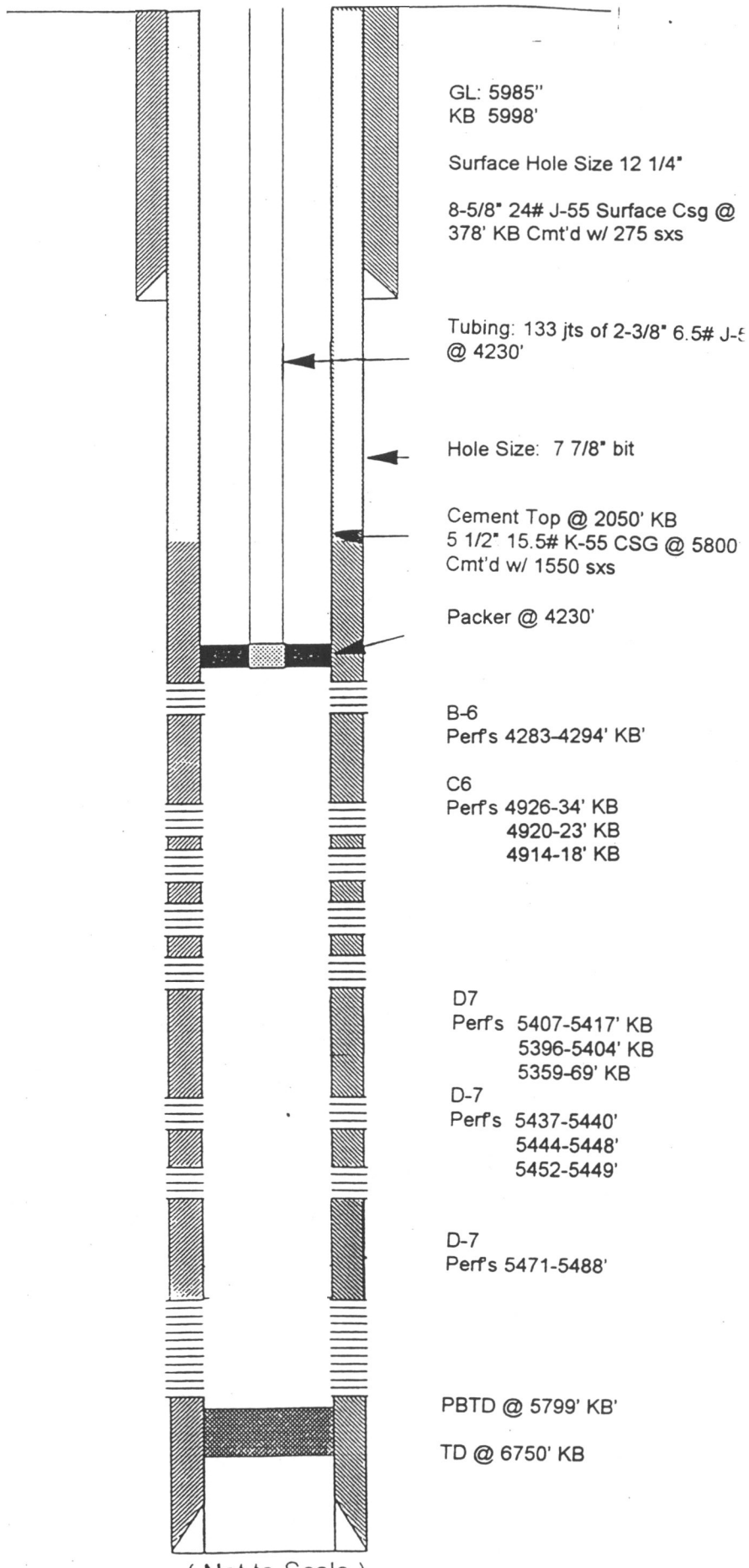
Well History

8/21/91 Spud Well

9/21/91 Perf'd D7 5471-88, 5449-52,5444-48,5437-40
Brk Dwn 2% Kcl water
Frac'd 120,000 # sand
ISIP 2,320 psi

10/27/91 Perf'd B6 4283-94
Frac'd 114,500# sand
ISIP 1000 psi

8/24/95 Pump Changes



(Not to Scale)

Petroglyph Operating Co., Inc.

Ute Tribal 05-08

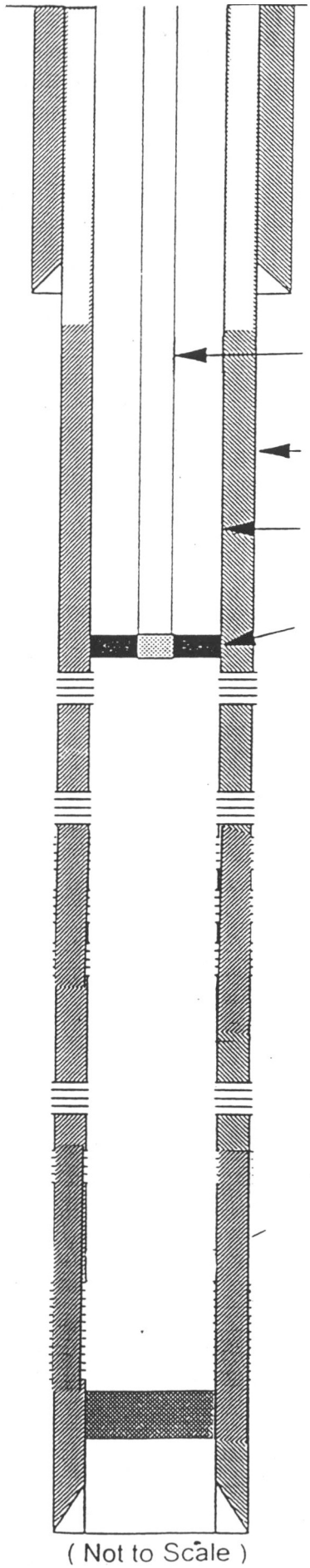
(2500' FNL & 550' FEL)

SE NE Section 5-T5S-R3W
Antelope Creek Field
Duchesne Co, Utah
API #43-013 31306: Lease #14-20-H62-4650

Ute Tribal #29-08A
Wellbore Diagram
After Conversion

Well History:

9/9/91	Spud Well "Coors"
9/12/91	Ran 5 1/2" casing with electric heater sections in 5 1/2" casing string 4810-20, 4674-88' KB.
9/25/91	Perf'd 4812-18' Brk Dwn 7½% HCl Frac'd 85,000# sand ISIP 2,000 psi
10/4/91	Perf'd 4678-86' Brk Dwn 7½% Acid Frac'd 100,00# sand ISIP 2,910 psi
10/15/91	Put well on production



GL: 6558'
KB 6571'

Surface Hole Size 12 1/4"

8-5/8" 24# J-55 Surface Csg @ 412' KB Cmt'd w/ 275 sxs

2 3/8" 4.70 J-55 EUE tubing 149 joints

Hole Size: 7 7/8" bit

Cement Top @ 420' KB
5 1/2" 15.5# K-55 CSG @ 6074'
5 1/2" casing heaters 4810-20', 4674-88' KB

Cmt'd w/ 850 sxs

Packer @ 4620' KB'

C-4
Perf's 4678-4686' KB

C-6
Perf's 4812-4818' KB

E-1
Perf's 5566-5578' KB

PBTD @ 5964' KB'

TD @ 6700' KB

(Not to Scale)

Petroglyph Operating Co., Inc.

Ute Tribal 29-08A

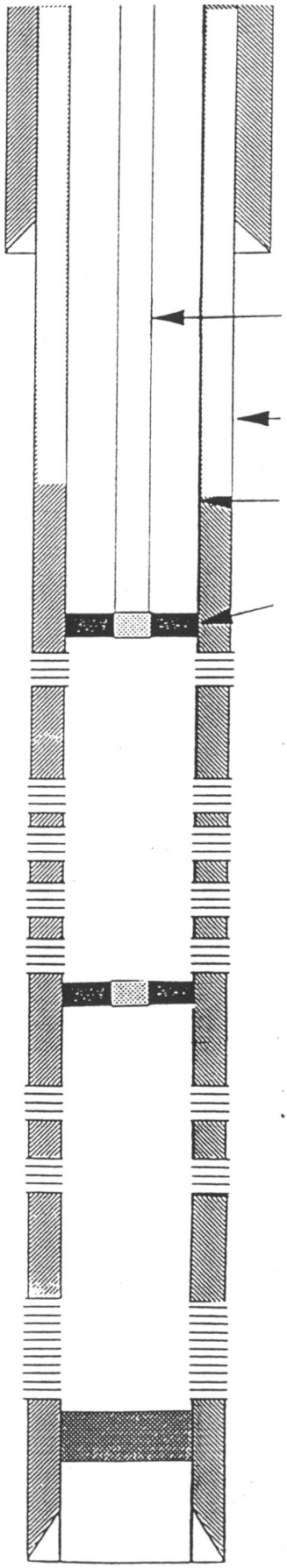
(2600' FNL & 600' FEL)

SE NE Section 29-T5S-R3W
Antelope Creek Field
Duchesne Co, Utah
API #43-013-31305: Lease #14-20-H62-3518

Ute Tribal #05-16
Wellbore Diagram
After Conversion

Well History:

5/24/95	Spud Well
10/12/95	Perf'd D-7 5438-42, 5414-17', 5396-5400', 5390-92', 5374-80', Brk Dwn 2% KCl water Frac'd 57,400# sand , ISIP 2,495 psi
10/13/95	Perf'd D-3 5201-06' KB Brk Dwn 2% KCL water Frac'd 29,500# sand ISIP 1980
10/19/95	Sqeeze cemented D-3 Perfs
10/20/95	Perf'd C-5 4827-32, 4816-20 Perf'd C-6 4934-38, 4908-12, 4918-23 Brk Dwn 2% KCL water Frac'd 67,800# sand ISIP 2070 psi
4/1/96	Re Frac C-6 sand Frac'd 25,500# sand ISIP 1,662 psi



(Not to Scale)

GL: 6049'
KB 6059'

Surface Hole Size 12 1/4"

8-5/8" 24# J-55 Surface Csg @ 434 KB Cmt'd w/ 225 sxs

Tubing: 154 jts of 2-3/8" 6.5# J-55 @ 4770' KB

Hole Size: 7 7/8" bit

Cement Top @ 2750' KB
5 1/2" 15.5# K-55 CSG @ 6147"
Cmt'd w/ 440 sxs

Packer @ 4770' KB

C-5
Perf's 4827-32' KB
4816-20' KB
C6
Perf's 4934-38' KB
4908-12' KB
4918-23' KB

RTBP set at 5080' KB

D-3
Perf's 5201-06' KB
Cement Squeezed'

D-7
Perf's 5438-42' KB
5414-17'
5396-5400'
5390-92'
5374-80'

PBTD @ 6088' KB'

TD @ 6190' KB

Petroglyph Operating Co., Inc.

Ute Tribal 05-16

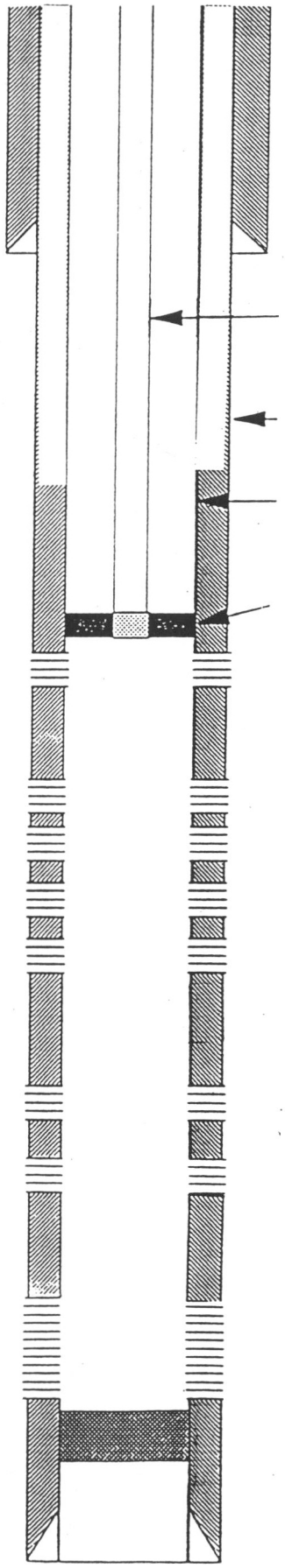
(708' FSL & 523' FEL)

SE SE Section 5-T5S-R3W
Antelope Creek Field
Duchesne Co, Utah
API #43-013 31527: Lease #14-20-H62-3504

Ute Tribal #04-05
Wellbore Diagram
After Conversion

Well History:

5/2/95	Spud Well
10/26/95	Perf'd D-7 5500-04, 5454-60,5418-22 5382-88, 5359-68, 5348-50, Brk Dwn 2% KCl water Frac'd 158,400# sand ISIP 1,950 psi
10/30/95	Perf'd D-3 5228-31 Brk Dwn 2% KCL water Frac'd 22,940# sand ISIP Screen out
11/3/95	Perf'd C5 4848-52 Perf'd C6 4942-48 Brk Dwn 2% KCL water Frac'd 66020# sand ISIP 1,772 psi
11/9/95	Perf'd B11 4564-72 Frac'd 27,700# sand ISIP 1,918 psi
11/14/95	Perf'd B6 4328-36 Frac'd 33,280# sand ISIP 2,078 psi
12/30/95	Date of First Production



GL: 5997'
KB 6007'

Surface Hole Size 12 1/4"

8-5/8" 24# J-55 Surface Csg @
425 KB Cmt'd w/ 350 sxs

Tubing: 139 jts of 2-3/8" 4.7# J-55
@ 4298' KB'

Hole Size: 7 7/8" bit

Cement Top @ 2450' KB
5 1/2" 15.5# K-55 CSG @ 5736"
Cmt'd w/ 1450 sxs

Packer @ 4298'

B-6
Perf's 4328-36' KB'

B-11
Perf's 4564-72' KB

C-5
Perf's 4848-52' KB

C6
Perf's 4942-48

D-3
Perf's 5228-31' KB

D-7
Perf's 5504-5348' KB

PBTD @ 6190' KB'

TD @ 6453' KB

(Not to Scale)

Petroglyph Operating Co., Inc.

Ute Tribal 04-05

(2725' FNL & 660' FWL)

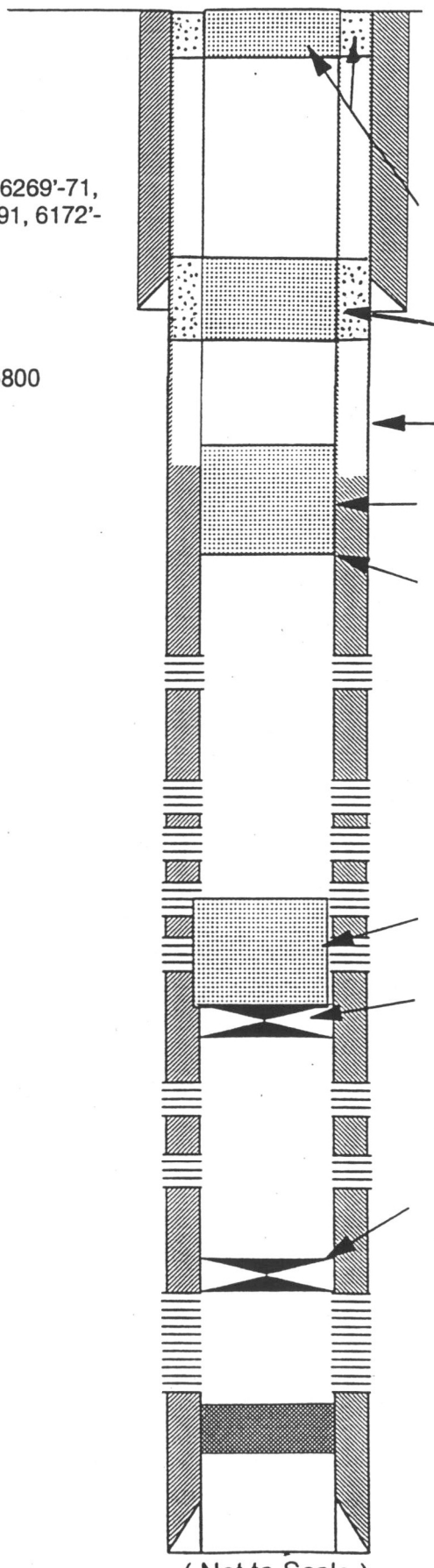
SW NW Section 4-T5S-R3W
Antelope Creek Field
Duchesne Co, Utah
API #43-013 31462: Lease #14-20-H62-3503

Ute Tribal #04-01
Wellbore Diagram
Plugged

Well History:

5/30/83	Spud Well "Coors"
6/24/83	Perf'd 6645'-35, 6525'-30, 6370'-74, Brk Dwn 2% KCl water Frac'd 76,500# sand ISIP 2,500 psi
6/30/83	Perf'd 6325'-26, 6311'-12, 6285'-86, 6269'-71, 6253'-54, 6248'-49, 6229'-31, 6190'-91, 6172'-74, 6160'-67, 6133'-40 Brk Dwn 7½% HCl Frac'd 90,000# sand ISIP 2,500 psi
9/8/83	Perf'd 5846, 43, 40, 36, 04, 03, 02, 5800 Perf'd 5743, 33, 29, 25, 21, 15 Brk Dwn 7½% Acid Frac'd 100,716# sand ISIP 2,700 psi
11/18/83	Perf'd 5477'-92, 5111'-15, 5529'-36 Frac'd 36,000# sand ISIP 2,000 psi
8/22/84	Perf'd 5082'-86, 5281'-85 Frac'd 100,000# sand
7/26/90	Pump Changes
2/7/92	Well Shut In
11/27/92	Acid job Put well back on production

Tubing Detail: 2' psp Packer, 156 jts



(Not to Scale)

Petroglyph Operating Co., Inc.

Ute Tribal 04-01

(1331' FNL & 1277' FEL)

NE NE Section 24-T5S-R3W
Antelope Creek Field
Duchesne Co, Utah
API #43-013 30762: Lease #14-20-H62-3503

Ute Tribal #05-0
Wellbore Diagram
Plugged

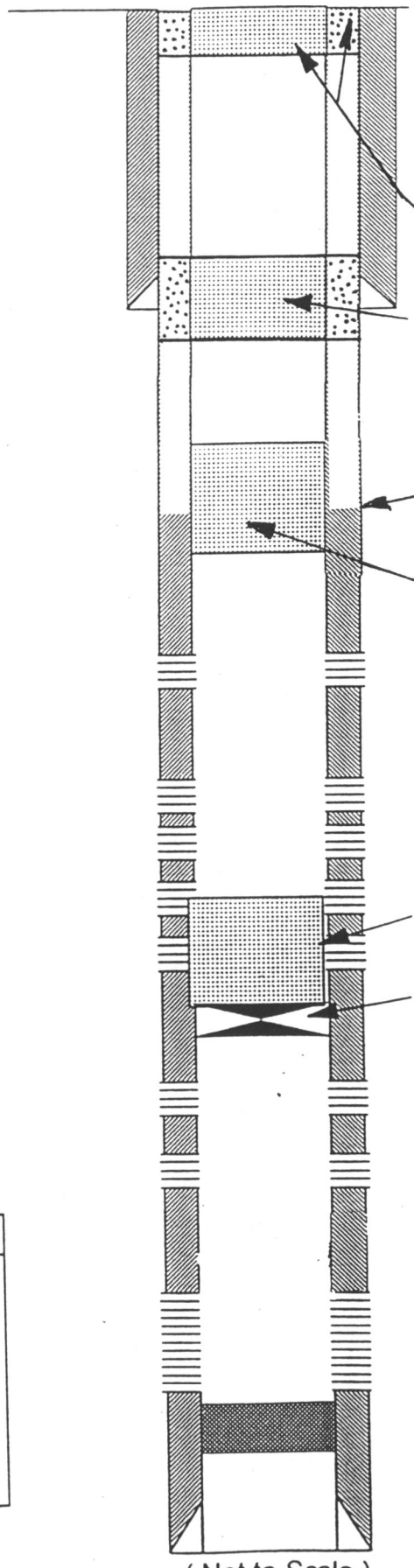
Well History

8/21/91 Spud Well

9/21/91 Perf'd D7 5471-88, 5449-52,5444-48,5437-40
Brk Dwn 2% Kcl water
Frac'd 120,000 # sand
ISIP 2,320 psi

10/27/91 Perf'd B6 4283-94
Frac'd 114,500# sand
ISIP 1000 psi

8/24/95 Pump Changes



GL: 5985"
KB 5998'

Surface Hole Size 12 1/4"

8-5/8" 24# J-55 Surface Csg @
378' KB Cmt'd w/ 275 sxs

Set a cement plug inside of the 5-1/2" casing, surface to 50'. A similiar plug in the 5-1/2" x 8-5/8" annulus.

Perforate production casing for 2', w/4 spf, at a point 50' below surface casing shoe, cement squeeze perfs, POOH leaving 100' cement plug inside 5-1/2" production casing, 50' above and 50' below surface casing shoe.

Cement Top @ 2050' KB
5 1/2" 15.5# K-55 CSG @ 5800'
Cmt'd w/ 1550 sxs

30 sxs Class G cement'
3800' to 4000' KB (200')

B-6
Perf's 4283-4294' KB'

C6
Perf's 4926-34' KB
4920-23' KB
4914-18' KB

CIBP 5300' KB
30 sxs Class "G" cement
5300' 5100' KB (200')

D7
Perf's 5407-5417' KB
5396-5404' KB
5359-69' KB

D-7
Perf's 5437-5440'
5444-5448'
5452-5449'

D-7
Perf's 5471-5488'

PBTD @ 5799' KB'

TD @ 6750' KB

(Not to Scale)

Petroglyph Operating Co., Inc.

Ute Tribal 05-08

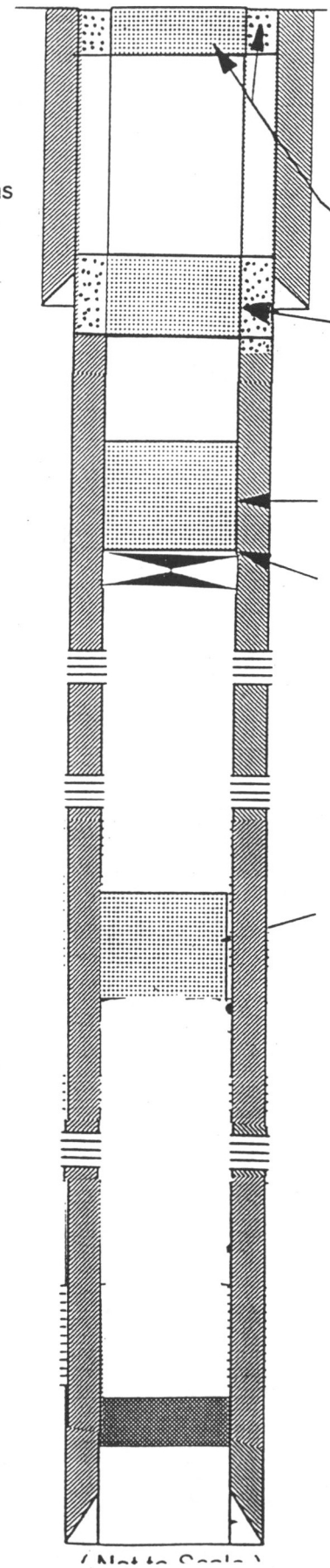
(2500' FNL & 550' FEL)

SE NE Section 5-T5S-R3W
Antelope Creek Field
Duchesne Co, Utah
API #43-013 31306: Lease #14-20-H62-4650

Ute Tribal #29-08A
Wellbore Diagram
Plugged

Well History:

9/9/91	Spud Well "Coors"
9/12/91	Ran 5 1/2" casing with electric heater sections in 5 1/2" casing string 4810-20, 4674-88' KB.
9/25/91	Perf'd 4812-18' Brk Dwn 7½% HCl Frac'd 85,000# sand ISIP 2,000 psi
10/4/91	Perf'd 4678-86' Brk Dwn 7½% Acid Frac'd 100,00# sand ISIP 2,910 psi
10/15/91	Put well on production



GL: 6558'
KB 6571' '

Surface Hole Size 12 1/4"

8-5/8" 24# J-55 Surface Csg @ 412' KB Cmt'd w/ 275 sxs

Set a cement plug inside of the 5-1/2" casing, surface to 50'. A similiar plug in the 5-1/2" x 8-5/8" annulus.

Perforate production casing for 2', w/4 spf, at a point 50' below surface casing shoe, cement squeeze perfs, POOH leaving 100' cement plug inside 5-1/2" production casing, 50' above and 50' below surface casing shoe.

Cement Top @ 420' KB
5 1/2" 15.5# K-55 CSG @ 6074'
5 1/2" casing heaters
4810-20', 4674-88' KB

Cmt'd w/ 850 sxs

CIBP @ 4600' KB'

30 sxs Class "G" cement
4400-4600' KB (200')

C-4
Perf's 4678-4686' KB

C-6
Perf's 4812-4818' KB

30 sxs Class "G" cement
4400-4600' KB (200')

E-1
Perf's 5566-5578' KB

PBTD @ 5964' KB'

TD @ 6700' KB

(Not to Scale)

Petroglyph Operating Co., Inc.

Ute Tribal 29-08A

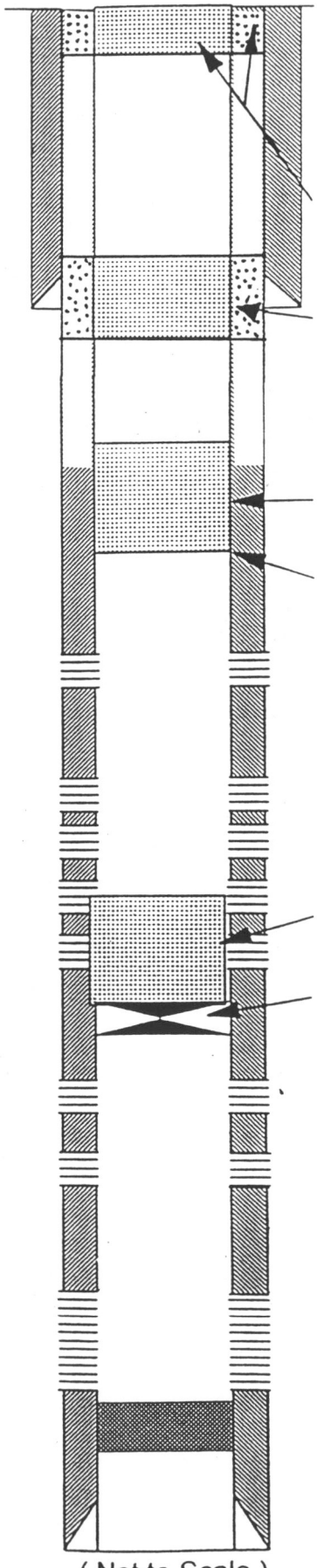
(2600' FNL & 600' FEL)

SE NE Section 29-T5S-R3W
Antelope Creek Field
Duchesne Co, Utah
API #43-013-31305: Lease #14-20-H62-3518

Ute Tribal #05-16
Wellbore Diagram
Plugged

Well History:

5/24/95	Spud Well
10/12/95	Perf'd D-7 5438-42, 5414-17', 5396-5400', 5390-92', 5374-80', Brk Dwn 2% KCl water Frac'd 57,400# sand ISIP 2,495 psi
10/13/95	Perf'd D-3 5201-06' KB Brk Dwn 2% KCL water Frac'd 29,500# sand ISIP 1980
10/19/95	Sqeeze cemented D-3 Perfs
10/20/95	Perf'd C-5 4827-32, 4816-20 Perf'd C-6 4934-38, 4908-12, 4918-23 Brk Dwn 2% KCL water Frac'd 67,800# sand ISIP 2070 psi
4/1/96	Re Frac C-6 sand Frac'd 25,500# sand ISIP 1,662 psi



GL: 6049'
KB 6059'

Surface Hole Size 12 1/4"

8-5/8" 24# J-55 Surface Csg @ 434 KB Cmt'd w/ 225 sxs

Set a cement plug inside of the 5-1/2" casing, surface to 50'. A similiar plug in the 5-1/2" x 8-5/8" annulus.

Perforate production casing for 2', w/4 spf, at a point 50' below surface casing shoe, cement squeeze perfs, POOH leaving 100' cement plug inside 5-1/2" production casing, 50' above and 50' below surface casing shoe.

Cement Top @ 2750' KB
5 1/2" 15.5# K-55 CSG @ 6147"
Cmt'd w/ 440 sxs

30 sxs Class "G" cement
4800'-4600' (200')

C-5
Perf's 4827-32' KB
4816-20' KB
C6
Perf's 4934-38' KB
4908-12' KB
4918-23' KB
D-3
Perf's 5201-06' KB
Cement Squeezed'

30 sxs Class "G" cement
5300-5100' (200;)
CIBP 5300'

D-7
Perf's 5438-42' KB
5414-17'
5396-5400'
5390-92'
5374-80'

PBTD @ 6088' KB'

TD @ 6190' KB

(Not to Scale)

Petroglyph Operating Co., Inc.

Ute Tribal 05-16

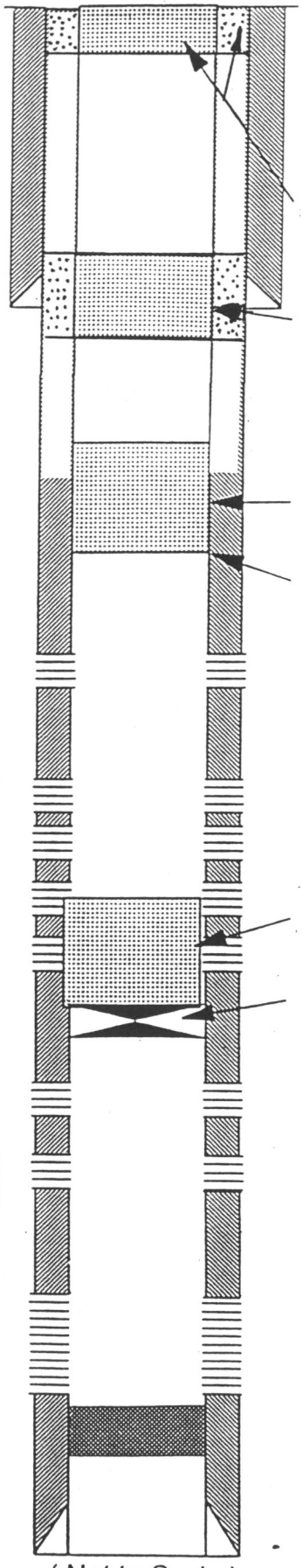
(708' FSL & 523' FEL)

SE SE Section 5-T5S-R3W
Antelope Creek Field
Duchesne Co, Utah
API #43-013 31527: Lease #14-20-H62-3504

Ute Tribal #04-05
Wellbore Diagram
Plugged

Well History:

5/2/95	Spud Well
10/26/95	Perf'd D-7 5500-04, 5454-60,5418-22 5382-88, 5359-68, 5348-50, Brk Dwn 2% KCl water Frac'd 158,400# sand ISIP 1,950 psi
10/30/95	Perf'd D-3 5228-31 Brk Dwn 2% KCL water Frac'd 22,940# sand ISIP Screen out
11/3/95	Perf'd C5 4848-52 Perf'd C6 4942-48 Brk Dwn 2% KCL water Frac'd 66020# sand ISIP 1,772 psi
11/9/95	Perf'd B11 4564-72 Frac'd 27,700# sand ISIP 1,918 psi
11/14/95	Perf'd B6 4328-36 Frac'd 33,280# sand ISIP 2,078 psi
12/30/95	Date of First Production



GL: 5997'
KB 6007'

Surface Hole Size 12 1/4"

8-5/8" 24# J-55 Surface Csg @
425 KB Cmt'd w/ 350 sxs

Set a cement plug inside of the 5-1/2" casing, surface to 50'. A similiar plug in the 5-1/2" x 8-5/8" annulus.

Perforate production casing for 2', w/4 spf, at a point 50' below surface casing shoe, cement squeeze perfs, POOH leaving 100' cement plug inside 5-1/2" production casing, 50' above and 50' below surface casing shoe.

Cement Top @ 2450' KB
5 1/2" 15.5# K-55 CSG @ 5736"
Cmt'd w/ 1450 sxs

30 sxs Class "G" cement
3800' - 4000' KB (200')

B-6
Perf's 4328-36' KB'

B-11
Perf's 4564-72' KB

C-5
Perf's 4848-52' KB

C6
Perf's 4942-48

30 sxs Class "G" cement
5300' 5100' KB (200')
CIBP 5300' KB

D-3
Perf's 5228-31' KB

30 sxs Class "G" cement
5300' 5100' KB (200')
CIBP 5300' KB

D-7
Perf's 5504-5348' KB

PBTD @ 6190' KB'

TD @ 6453' KB

(Not to Scale)

Petroglyph Operating Co., Inc.

Ute Tribal 04-05

(2725' FNL & 660' FWL)

SW NW Section 4-T5S-R3W
Antelope Creek Field
Duchesne Co, Utah
API #43-013 31462: Lease #14-20-H62-3503

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION VIII
999 18th STREET - SUITE 500
DENVER, COLORADO 80202-2466

JUL -6 1995

Ref: 8WM-DW

MEMORANDUM

SUBJECT: **Final Guidance for Conducting a Pressure Test to Determine if a Well Has Leaks in the Tubing, Casing or Packer**

FROM: Tom Pike, Chief UIC Direct Implementation

TO: UIC Direct Implementation Permit Writers

Introduction

The Underground Injection Control (UIC) regulations require that an injection well have mechanical integrity at all times (40 CFR 144.28 (f)(2) and 40 CFR 144.51 (q)(1)). A well has mechanical integrity (40 CFR 146.8) if:

(1) There is no significant leak in the tubing, casing or packer; and

(2) There is no significant fluid movement into an underground source of drinking water (USDW) through vertical channels adjacent to the injection wellbore.

Definition: Mechanical Integrity Pressure Test for Part I. A pressure test used to determine the integrity of all the downhole components of an injection well, usually tubing,casing and packer. It is also used to test tubing cemented in the hole by using a tubing plug or retrievable packer. Pressure tests must be run at least once every five years. **If for any reason the tubing/packer is pulled, the injection well is required to pass another mechanical integrity test of the tubing casing and packer prior to recommencing injection regardless of when the last test was conducted. Tests run by operators in the absence of an EPA inspector must be conducted according to these procedures and recorded on either the attached form or an equilivant form containing the necessary information. A pressure recording chart documentating the actual annulus test pressures must be attached to the form.**

This guidance addresses making a determination of Part I of Mechanical Integrity (no leaks in the tubing, casing or

packer). The Region's policy is: 1) to determine if there are significant leaks in the tubing, casing or packer; 2) to assure that the casing can withstand pressure similar to that which would be applied if the tubing or packer fails; 3) to make the Region's test procedure consistent with the procedures utilized by other Region VIII Primacy programs; and 4) to provide a procedure which can be easily administered and is applicable to all class I and II wells. Although there are several methods allowed for determining mechanical integrity, the principal method involves running a pressure test of the tubing/casing annulus. Region VIII's procedure for running a pressure test is intended to aid UIC field inspectors who witness pressure tests for the purpose of demonstrating that a well has Part I of Mechanical Integrity. The guidance is also intended as a means of informing operators of the procedures required for conducting the test in the absence of an EPA inspector.

Pressure Test Description

Test Frequency

The mechanical integrity of an injection well must be maintained at all times. Mechanical integrity pressure tests are required at least every five (5) years. **If for any reason the tubing/packer is pulled, however, the injection well is required to pass another mechanical integrity test prior to recommencing injection regardless of when the last test was conducted. The Regional UIC program must be notified of the workover and the proposed date of the pressure test. The well's test cycle would then start from the date of the new test if the well passes the test and documentation is adequate.** Tests may be required on a more frequent basis depending on the nature of the injectate and the construction of the well (see Section guidance on MITs for wells with cemented tubing and regulations for Class I wells).

Region VIII's criteria for well testing frequency is as follows:

1. Class I hazardous waste injection wells; initially [40 CFR 146.68(d)(1)] and annually thereafter;

2. Class I non-hazardous waste injection wells; initially and every two (2) years thereafter, except for old permits (such as the disposal wells at carbon dioxide extraction plants which require a test at least every five years);

3. Class II wells with tubing, casing and packer; initially and at least every five (5) years thereafter;

4. Class II wells with tubing cemented in the hole; initially and every one (1) or two (2) years thereafter depending on well specific conditions (See Region VIII UIC Section Guidance #36);

5. Class II wells which have been temporarily abandoned (TAd) must be pressure tested after being shut-in for two years; and

6. Class III uranium extraction wells; initially.

Test Pressure

To assure that the test pressure will detect significant leaks and that the casing is subjected to pressure similar to that which would be applied if the tubing or packer fails, the tubing/casing annulus should be tested at a pressure equal to the maximum allowed injection pressure or 1000 psig whichever is less. The annular test pressure must, however, have a difference of at least 200 psig either greater or less than the injection tubing pressure. Wells which inject at pressures of less than 300 psig must test at a minimum pressure of 300 psig, and the pressure difference between the annulus and the injection tubing must be at least 200 psi.

Test Criteria

1. The duration of the pressure test is 30 minutes.

2. Both the annulus and tubing pressures should be monitored and recorded every five (5) minutes.

3. If there is a pressure change of 10 percent or more from the initial test pressure during the 30 minute duration, the well has failed to demonstrate mechanical integity and should be shut-in until it is repaired or plugged.

4. A pressure change of 10 percent or more is considered significant. If there is no significant pressure change in 30 minutes from the time that the pressure source is disconnected from the annulus, the test may be completed as passed

Recordkeeping and Reporting

The test results must be recorded on the attached form. The annulus pressure should be recorded at five (5) minute intervals. **Tests run by operators in the absence of an EPA inspector must be conducted according to these procedures and recorded on the attached form or an equilivant form . A pressure recording chart documentating the actual annulus test pressures must be attached to the submittal.** The tubing pressure at the beginning and end of each test must be recorded. The volume of the annulus fluid bled back at the surface after the test should be measured and recorded on the form. This can be done by bleeding the annulus pressure off and discharging the associated fluid into a five gallon container. The volume information can be used to verify the approximate location of the packer.

Procedures for Pressure Test

1. Scheduling the test should be done at least two (2) weeks in advance.

2. Information on the well completion (location of the packer, location of perforations, previous cement work on the casing, size of casing and tubing, etc.) and the results of the previous MIT test should be reviewed by the field inspector in advance of the test. Regional UIC Guidance #35 should also be reviewed. Information relating to the previous MIT and any well workovers should be reviewed and taken into the field for verification purposes.

3. All Class I wells and Class II SWD wells should be shut-in prior to the test. A 12 to 24-hour shut-in is preferable to assure that the temperature of the fluid in the wellbore is stable.

4. Class II enhanced recovery wells may be operating during the test, but it is recommended that the well be shut-in if possible.

5. The operator should fill the casing/tubing annulus with inhibited fluid at least 24 hours in advance, if possible. Filling the annulus should be undertaken through one valve with the second valve open to allow air to escape. After the operator has filled the annulus, a check should be made to assure that the annulus will remain full. If the annulus can not maintain a full column of fluid, the operator should notify the Director and begin a rework. The operator should measure and report the volume of fluid added to

the annulus. If not already the case, the casing/tubing valves should be closed, at least, 24 hours prior to the pressure test.

Following steps are at the well:

6. Read tubing pressure and record on the form. If the well is shut-in, the reported information on the actual maximum operating pressure should be used to determine test pressures.

7. Read pressure on the casing/tubing annulus and record value on the form. If there is pressure on the annulus, it should be bled off prior to the test. If the pressure will not bleed-off, the guidance on well failures (Region VIII UIC Section Guidance #35) should be followed.

8. Ask the operator for the date of the last workover and the volume of fluid added to the annulus prior to this test and record information on the form.

9. Hook-up well to pressure source and apply pressure until test value is reached.

10. Immediately disconnect pressure source and start test time. (If there has been a significant drop in pressure during the process of disconnection, the test may have to be restarted.) The pressure gages used to monitor injection tubing pressure and annulus pressure should have a pressure range which will allow the test pressure to be near the mid-range of the gage. Additionally, the gage must be of sufficient accuracy and scale to allow an accurate reading of a 10 percent change to be read. For instance, a test pressure of 600 psi should be monitored with a 0 to 1000 psi gage. The scale should be incremented in 20 psi increments.

11. Record tubing and annulus pressure values every five (5) minutes.

12. At the end of the test, record the final tubing pressure.

13. If the test fails, check the valves, bull plugs and casing head close up for possible leaks. The well should be retested.

14. If the second test indicates a well failure, the Region should be informed of the failure within 24 hours by the operator, and the well should be shut-in within 48 hours per Headquarters guidance #76. A follow-up

letter should be prepared by the operator which outlines the cause of the MIT failure and proposes a potential course of action. This report should be submitted to EPA within five days.

15. Bleed off well into a bucket, if possible, to obtain a volume estimate. This should be compared to the calculated value obtained using the casing/tubing annulus volume and fluid compressibility values.

16. Return to office and prepare follow-up.

Attachment

Form Approved. OMB No. 2000-0042. Approval expires 9-30-86

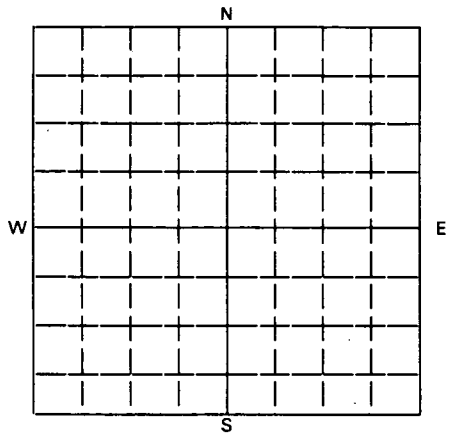
UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
WASHINGTON, DC 20460

EPA

WELL REWORK RECORD

NAME AND ADDRESS OF PERMITTEE	NAME AND ADDRESS OF CONTRACTOR

LOCATE WELL AND OUTLINE UNIT ON SECTION PLAT — 640 ACRES



STATE	COUNTY	PERMIT NUMBER

SURFACE LOCATION DESCRIPTION

¼ OF ¼ OF ¼ SECTION TOWNSHIP RANGE

LOCATE WELL IN TWO DIRECTIONS FROM NEAREST LINES OF QUARTER SECTION AND DRILLING UNIT

Surface Location ____ ft. from (N/S) ____ Line of quarter section

and ____ ft. from (E/W) ____ Line of quarter section

WELL ACTIVITY		TYPE OF PERMIT
☐ Brine Disposal ☐ Enhanced Recovery ☐ Hydrocarbon Storage	Total Depth Before Rework	☐ Individual ☐ Area Number of Wells ____
	Total Depth After Rework	
Lease Name	Date Rework Commenced	Well Number
	Date Rework Completed	

WELL CASING RECORD — BEFORE REWORK

Casing		Cement		Perforations		Acid or Fracture Treatment Record
Size	Depth	Sacks	Type	From	To	

WELL CASING RECORD — AFTER REWORK *(Indicate Additions and Changes Only)*

Casing		Cement		Perforations		Acid or Fracture Treatment Record
Size	Depth	Sacks	Type	From	To	

DESCRIBE REWORK OPERATIONS IN DETAIL USE ADDITIONAL SHEETS IF NECESSARY	WIRE LINE LOGS, LIST EACH TYPE	
	Log Types	Logged Intervals

CERTIFICATION

I certify under the penalty of law that I have personally examined and am familiar with the information submitted in this document and all attachments and that, based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the information is true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment. (Ref. 40 CFR 144.32).

NAME AND OFFICIAL TITLE *(Please type or print)*	SIGNATURE	DATE SIGNED

Form Approved. OMB No. 2000-0042. Approval expires 9-30-86

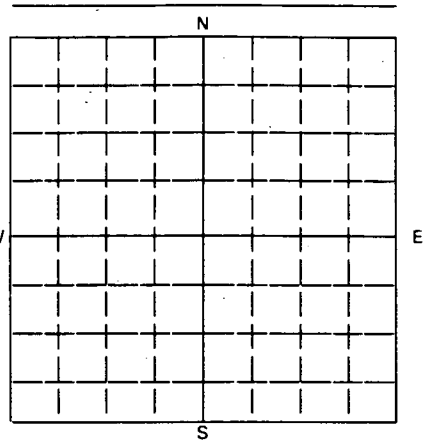
EPA

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
WASHINGTON, DC 20460

WELL REWORK RECORD

NAME AND ADDRESS OF PERMITTEE	NAME AND ADDRESS OF CONTRACTOR

LOCATE WELL AND OUTLINE UNIT ON SECTION PLAT — 640 ACRES



STATE	COUNTY	PERMIT NUMBER

SURFACE LOCATION DESCRIPTION

¼ OF ¼ OF ¼ SECTION TOWNSHIP RANGE

LOCATE WELL IN TWO DIRECTIONS FROM NEAREST LINES OF QUARTER SECTION AND DRILLING UNIT

Surface Location ____ ft. from (N/S) ____ Line of quarter section

and ____ ft. from (E/W) ____ Line of quarter section

WELL ACTIVITY	Total Depth Before Rework	TYPE OF PERMIT
☐ Brine Disposal ☐ Enhanced Recovery ☐ Hydrocarbon Storage	Total Depth After Rework	☐ Individual ☐ Area Number of Wells ____
Lease Name	Date Rework Commenced	Well Number
	Date Rework Completed	

WELL CASING RECORD — BEFORE REWORK

Casing		Cement		Perforations		Acid or Fracture
Size	Depth	Sacks	Type	From	To	Treatment Record

WELL CASING RECORD — AFTER REWORK *(Indicate Additions and Changes Only)*

Casing		Cement		Perforations		Acid or Fracture
Size	Depth	Sacks	Type	From	To	Treatment Record

DESCRIBE REWORK OPERATIONS IN DETAIL USE ADDITIONAL SHEETS IF NECESSARY	WIRE LINE LOGS, LIST EACH TYPE	
	Log Types	Logged Intervals

CERTIFICATION

I certify under the penalty of law that I have personally examined and am familiar with the information submitted in this document and all attachments and that, based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the information is true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment. (Ref. 40 CFR 144.32).

NAME AND OFFICIAL TITLE *(Please type or print)*	SIGNATURE	DATE SIGNED